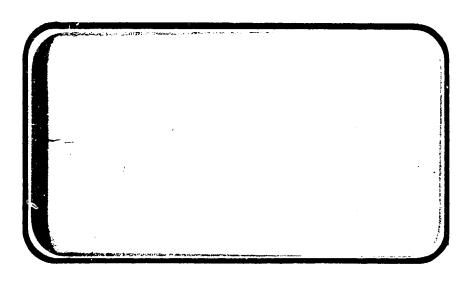


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CR 134080



NASA-CR-134080) SUPERSCRIC FERFORMANCE, STABILITY AND CONTROL CHARACTERISTICS OF 0.01875 SCALE MODEL FOCKWELL LATERNATIONAL 089E-139B CREICE Corp.) 74 p HC \$6.75 hryster

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services



DMS-DR-2090 NASA CR-134,080

SUPERSONIC PERFORMANCE, STABILITY AND

CONTROL CHARACTERISTICS OF A 0.01875 SCALE MODEL

ROCKWELL INTERNATIONAL 089B-139B

ORBITER CONFIGURATION

(LASC)

Ву

R. W. Powell, NASA/LaRC G. M. Ware, NASA/LaRC

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services Chrysler Corporation Space Division New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS

Test Numbers:

UPWT 1040

NASA Series No.:

La8C

Date:

July 10 - 13, (42 Occ. Hrs.)

FACILITY COORDINATOR:

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FORN. D. Kemp
Data Management Services

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Chrysler Corporation Space Division assumes no responsibility for the data presented herein other than their display characteristics.

SUPERSONIC PERFORMANCE, STABILITY AND CONTROL CHARACTERISTICS OF A 0.01875 SCALE MODEL ROCKWELL INTERNATIONAL 089B-139B ORBITER CONFIGURATION

Ву

R. W. Powell and G. M. Ware, NASA/LaRC

SUMMARY

An investigation was made in the Langley Unitary Plan Wind Tunnel at Mach numbers of 1.9 and 2.86 to study the supersonic aerodynamic characteristics of a Rockwell International shuttle orbiter configuration. Tests were made at a Reynolds number of 1.5 x 10^6 per foot with an angle-of-attack range of -4° to 28° and sideslip variations of -6° to 8° . The effects of elevon and aileron deflections were investigated.

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Effect of Aileron Deflection on Lateral- Directional Characteristics in Sideslip	U	ALPHA, AILRON	27-28
Aileron Control Effectiveness	Q	ВЕТА	29-30
Rudder Control Effectiveness	ш	ВЕТА	31-32

COEFFICIENT SCHEDULE:

C: CY, CYN, CBL VS. BETA	D: DCY/DA, DCYNDA, DCBLDA VS. ALPHA
A: CA, CN, CL, CLM, L/D, CD VS. ALPHA	CD VS. CL

DCY/DB, DCBLDB, DCYNDB VS. ALPHA

: :

NOMENCLATURE General

SYMBOL	SADSAC SYMBOL	DEFINITION
51		speed of sound; m/sec, ft/sec
$C_{\mathbf{p}}$	CP	pressure coefficient; $(p_{\underline{l}} - p_{\varpi})/q$
М	MA CH	Mach number; V/a
р		pressure; N/m ² , psf
P	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
v		velocity: m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , $slugs/ft^3$
	R	eference & C.G. Definitions
Ab .		base area; m^2 , ft^2
þ	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ REF ĉ	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing erea or reference erea; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
SUBSCRIP b 1 s t	<u>TS</u>	base local static conditions total conditions free stream

NOMENCLATURE (Continued) Body-Axis System

(

SYMBOL	SADSAC SYMBOL	DEFINITION
$^{\mathrm{C}}_{\mathrm{N}}$	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	exial-force coefficient; axial force
$c_{\mathbf{Y}}$	CY	side-force coefficient; side force
$^{\mathrm{C}_{A}}{}_{b}$	CAB	base-force coefficient; base force
•		$-A_b(p_b - p_\infty)/qS$
$\mathrm{c}_{\mathtt{A}_{\mathtt{f}}}$	CAF	forebody axial force coefficient, c_A - c_{A_b}
$C_{\mathbf{m}}$	CLM	pitching-moment coefficient; pitching moment qSIREF
C_n	CYN	yawing-moment coefficient; yawing moment qSb
° 1	CBL	rolling-moment coefficient; rolling moment qSb
		Stability-Axis System
$c^{\mathbf{\Gamma}}$	CL	lift coefficient; lift qS
c_D	CD	drag coefficient: drag qS
c_{D_b}	CDB	base-drag coefficient; base drag
$\mathrm{c}_{D_{\mathbf{f}}}$	CDF	forebody drag coefficient; c_D - c_{D_b}
$\mathtt{C}_{f Y}$	CY	side-force coefficient; side force qS
$C_{\mathbf{m}}$	CL	pitching-moment coefficient; pitching moment qs/REF
C_n	CLN	yawing-moment coefficient; yawing moment qSb
c l	CSL	rolling-moment coefficient; rolling moment qSb
r/D	T/D	lift-to-drag ratio; C _I /C _D

NOMENCLATURE (Continued)

SYMBOL	SADSAC SYMBOL	DEFINITION
^δ e∟		left elevon surface deflection angle, positive deflection trailing edge down; degrees.
^δ e _R		right elevon surface deflection angle, positive deflection trailing edge down; degrees.
^δ e	ELEVTR	<pre>elevator, surface deflection angle, positive deflection trailing edge down, degrees,</pre>
		(⁶ e _L + ⁵ e _R)/2
$^{\delta}a$	AILRON	aileron, aileron deflection angle, degrees,
		(δe _L - δe _R)/2
	GT-LOC	grit location (refer to Test Conditions).
K	K	roughness height.
K/ l	K/L	ratio of roughness to model body length($\ell = 24.93$ in).
	CPC	cavity pressure coefficient.
	CPB1, CPB2	base pressure coefficients.
CYB	DCY/DB	side force coefficient derivative with respect to beat. Algebraic difference of the side force coefficient of two runs divided by the algebraic difference of the side slip angle of the runs; per degree.
С _{п в}	DCYNDB	yawing moment coefficient derivative with respect to beta. Algebraic difference of the yawing moment coefficient of two runs divided by the algebraic difference of the side slip angle of the runs; body axis system; per degree.
$^{\delta}$ R	RUDDER	rudder deflection angle, degree.
^δ BF	BDFLAP	body flap deflection angle, degree.
$^{\delta}$ RF	RUDFLF	rudder flare, split rudder deflection angle, degree.

NOMENCLATURE (Concluded)

SYMBOL	SADSAC SYMBOL	DEFINITION
$c_{\ell_{\beta}}$	DCBLDB	rolling moment coefficient derivative with respect to beta. Algebraic difference of rolling moment coefficient of two runs divided by algebraic difference of side slip angle of the runs; body axis system; per degree.
$c_{y_{\delta_a}}$	DCY/DA	side force coefficient derivative with received to total aileron deflection. Algebraic dinterests of the side force coefficients of two runs data with the algebraic difference of the total aileron deflection angle of the runs; per degree.
C _{loa}	DCBLDA	rolling moment coefficient derivative with respect to total aileron deflection. Algebraic difference of the rolling moment coefficient of two runs divided by the algebraic difference of the total aileron derilection angle of the runs; body axis system; per degree.
^{Cn} _{δa}	DCYNDA	yawing moment coefficient derivative with respect to total aileron deflection. Algebraic difference of the yawing moment coefficient of two runs divided by the algebraic difference of the total aileron deflection angle of the runs; body axis system; per degree.
C _{yôr}	DCY/DR	side force coefficient derivative with respect to rudder deflection. Algebraic difference of the side force coefficient of two runs divided by the algebraic difference of the rudder deflection angle of the runs; body axis system; per degree.
Cn _{ôr}	DCYNDR	yawing moment coefficient derivative with respect to rudder deflection. Algebraic difference of the yawing moment coefficient of two runs divided by the algebraic difference of the rudder deflection angle of the runs; body axis system; per degree.
C _l _o r	DCBLDR	rolling moment coefficient derivative with respect to rudder deflection. Algebraic difference of the rolling moment coefficient of two runs divided by the algebraic difference of the rudder deflection angle of the runs; body axis system; per degree.

TEST FACILITY DESCRIPTION

The NASA LaRC 4-foot Unitary Plan Wind Tunnel (UPWT) is a closed-circuit, continuous flow, variable density facility. The test section is 4 feet by 4 feet long.

Two tunnel legs are available for supersonic testing in the Mach number ranges 1.47 to 2.86 (leg No. 1) and 2.29 to 4.63 (Leg No. 2). Leg No. 1 was used for this test. An asymmetric, sliding block nozzle position and total pressure setting provide the test Mach numbers at a specified keynolds number. Reynolds number can be varied from 0.76 to 7.78 million per foot. Available stagnation pressure variation is 4.0 to 142, psia. Dynamic pressure variation is 95, to 1260, psf with normal operating stagnation temperature about 150°F in Mach modes 2 or 3 and about 175°F in Mach mode 4. The tunnel is equipped with a dry air supply, an evacuating system, and a cooling system. The facility power is approximately 83,000 horsepower.

Model mounting provisions consist of various sting arrangements, including axial (longitudinal), lateral (independent pitch and yaw), and roll movement with side wall support. A Schlieren system and oil flow visualization equipment are available. Data are recorded at the tunnel and reduced off-line at the Langley Computer Center. The tunnel is used for force and moment, pressure, and dynamic stability tests. Hot and cold jet effects and heat transfer have been studied in the UPWT.

CONFIGURATION INVESTIGATED

1

The configuration tested was a 0.01875 scale model of a blend of Rockwell International shuttle configurations. The model consisted of a 089B configuration with a 139B configuration mose forward of F.S. 500. A sketch of the model is shown in figure 2. All of the tests were made with the rudder flared to form a 40° wedge vertical tail and the body flap deflected -14.25°. Tests were made with eleven deflections ranging from -30° to 0°, and a 10° aileron deflection about a -10° elevon deflection.

DATA REDUCTION

A LaRC 832-B six-component strain gage balance was used to measure model forces and moments. All final data were presented along a set of body and stability axes passing through the nominal center of gravity located at F.S. 1076.48 or 65 percent of the body length. Model data were converted to standard NASA Coefficients using the following constants:

Reference Area, S_{ref} = wing planform area = 0.9457 ft.²

Reference Length, \bar{c}_{ref} = wing mean aerodynamic chord = 8.9025 in.

Reference Span, b_{ref} = wing span = 17.5628 in.

Transition was fixed with number 50 grit located 0.283 inch stream-wise on wing and vertical tail, and 1.2 inches streamwise on nose. The drag data presented herein is gross drag in that base drag is included. Tabulated base pressure coefficients are presented, however, if corrections are desired.

TABLE I

TEST CONDITIONS STAGNATION TEMP! (degrees Fahrenh 1.90 1.5 × 10 ⁶ 2.500 2.059 2.0			LE I.	TAI	
### REYNOLDS NUMBER (per unit length) ### DYNAMIC PRESSURE Junds/sq. inch) ### (degrees Fahrenhing) ###	0-13,197	DATE : 7/10-		0	TEST : UPWT 104
Capacity: Accuracy: Coefficient Tolerance:			IDITIONS	TEST CO!	
Capacity: Accuracy: Coefficient Tolerance:				•	
Comparison Com			DVNAMO DOSCUDE	REYNOLDS NUMBER	
1.90 1.5 x 10 ⁶ 2.500 2.86 1.5 x 1(⁶ 2.059 BALANCE UTILIZED: 832-B CAPACITY: ACCURACY: COEFFICIENT TOLERANCE: NF 1000 1b ±5.00 1b SF 250 1b ±1.25 1b AF 85 1b ±0.43 1b PM 2000 in-1b ±10.00 in-1b RM 1000 in-1b ±5.00 in-1b				•	MACRITUMBER
2.86			2.500	1.5 x 10 ⁶	1.90
BALANCE UTILIZED: 832-B CAPACITY: ACCURACY: COEFFICIENT TOLERANCE: NF 1000 1b		†		1.5 x 1(⁶	2.86
CAPACITY: ACCURACY: COEFFICIENT TOLERANCE: NF					<u> </u>
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CAPACITY: ACCURACY: COEFFICIENT TOLERANCE: NF				877_p	DALAMOS HTH 1750.
TOLERANCE: NF 1000 1b				032-B	BALANCE UTILIZED:
NF 1000 1b ± 5.00 1b SF 250 1b ± 1.25 1b AF 85 1b ± 0.43 1b PM 2000 in-1b ± 10.00 in-1b RM 1000 in-1b ± 5.00 in-1b		COEFFICIENT TOLERANCE:	ACCURACY:	CAPACITY:	
SF 250 1b ±1.25 1b AF 85 1b ±0.43 1b PM 2000 in-1b ±10.00 in-1b RM 1000 in-1b ±5.00 in-1b			±5.00 1b	1000 1b	NF
AF85 1b±0.43 1b	•				SF
RM 1000 in-1b ±5.00 in-1b			· ·	85_1b	AF
			±10.00 in-1b		PM
$YM = 500 \text{ in-1b} \qquad \pm 2.50 \text{ in-1b}$,			
	.]	·	±2.50 in-1b	500 in-1b	YM
COMMENTS:		•			00,445

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TABLE III. MODEL COMPONENT DIMENSIONAL DATA

MODEL COMPONENT: BODY - 089B-139B(Modified Nose)							
GENERAL DESCRIPTION: Nose section from	full-scale station 238	3.0 to STA. 500					
from NAR drawing VL70-000139B. Remainin	g body AFT of STA 500	from NAR					
drawing VL, 0-000093							
DRAWING NUMBER: VL70-000093							
	— —	.01875					
DIMENSIONS:	FULL-SCALE	MODEL SCALE					
Length	1290.3	24.193					
Max. Width	265.0	4.969					
Max. Depth	248.0	4.650					
Fineness Ratio	4.869	4.869					
Area							
Max. Cross-Sectional	456.40	0.1605					
Planform							
Wetted							
Base							

TABLE III. (CONTINUED)

(

C

MODEL COMPONENT: ELEVON		
GENERAL DESCRIPTION: CONFIGURATION PER LINES DATA FOR (1) OF (2) SIDES	VL79-000093	
		
MODEL SCALE = 0.01875		
DRAWING NUMBER: VL70-000093		
DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area	205.517	0.0723
Span (equivalent)	353.34	6.625
Inb'd equivalent chord	114.78	2.152
Outb'd equivalent chord	55.00	1.031
Ratio movable surface chord/ total surface chord	•	
At Inb'd equiv. chord	.208	.208
At Outb'd equiv. chord	.400	.400
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Tailing Edge	-10.02	-10.02
Hingeline	0.00	0.00
Area Moment (Normal to hinge line) - Ft3	1548.07	0.0102

TABLE III. (CONTINUED)

MODEL COMPONENT: WING		
GENERAL DESCRIPTION: Orbiter Configuration	per Lines VL70-00009	3.
NOTE: (Dihedral angle is defined at the low	er surface of the wi	ng at the 75.33%
element line projected into a plane p		
SCALE MODEL = 0.01875		
DRAWING NUMBER: VL70-000093		
DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA	•	
Planform Welted Span (equivalent) Aspect Ratio Rate of Taper Taper Ratio Diehedral Angle, degrees Incidence Angle, degrees Aerodynamic Twist, degrees Toe-In Angle Cant Angle Sweep Back Angles, degrees Leading Edge Trailing Edge O.25 Element Line Chords: Root (Wing Sta. 0.0) Tip, (equivalent) MAC Fus. Sta. of .25 MAC W.P. of .25 MAC Airfoil Section Root	2690.00 936.68 2.265 1.177 0.200 3.500 3.000 +3.000 -10.24 35.209 689.24 137.85 474.81 1136.89 299.20 182.13	0.9457
Tip EXPOSED DATA -		
Area Span, (equivalent) Aspect Ratio Taper Ratio Chords Root Tip MAC Fus. Sta. of .25 MAC W.P. of .25 MAC B.L. of .25 MAC	1752.29 720.68 2.058 0.2451 562.40 137.85 393.03 1185.31 300.20 143.76	0.6160 13.513 2.058 0.2451 10.545 2.585 7.369 22.224 5.629 2.700

TABLE III. (CONTINUED)

MODEL COMPONENT:	Vertical Tail		
GENERAL DESCRIPTION:	Centerline vertical	tail double wedge ai	rfoil with
rounded leading edge.			
Scale Model = 0.01875			· · · · · · · · · · · · · · · · · · ·
DRAWING NUMBER:	VL70-000095		
DIMENSIONS:		FULL-SCALE	MODEL SCALE
Area (theo) fo	z. ²	413.25	0.145
Span (rquivalen	t)	315.72	5.920
Inb'd equivalen	t chord	268.50	5.034
Outb'd equivalent chord		108.47	2.034
Ratio movable s total surface		•	
At Inb'd e	quiv. chord		
At Outb'd	equiv. chord		-
Sweep Back Angl	es, degrees		
Leading Ed	g e	45	45
Tailing Ed	ge	26.249	26.249
Hingeline		***************************************	***************************************
Area Moment (No	rmal to hinge line)		

TABLE III. (CONCLUDED)

MODEL COMPONENT:	RUDDER		
GENERAL DESCRIPTION:	CONFIGURATION PER LINES	VL70-000095	
SCALE MODEL = 0.01875			
DRAWING NUMBER:	VL70-000095	***************************************	
DIMENSIONS:		FULL-SCALE	MODEL SCALE
Area		106.38	0.0374
Span (equivalent))	201.0	3.769
Inb'd equivalent	chord	91.585	1.717
Outb'd equivalent	t chord	50.833	0.953
Ratio movable sur total surface o			
At Inb'd equ	uiv. chord	0.400	0.400
At Outb'd equiv. chord		0.400	0.400.
Sweep Back Angles	s, degrees	•	
Leading Edge	•	34.83	34.83
Tailing Edge	•	26.25	26.25
Hingeline		34.83	34.83
Area Moment (Norm	mal to hinge line)-Ft ³	526.125	0.0034

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Figure 1. - Axis Systems.

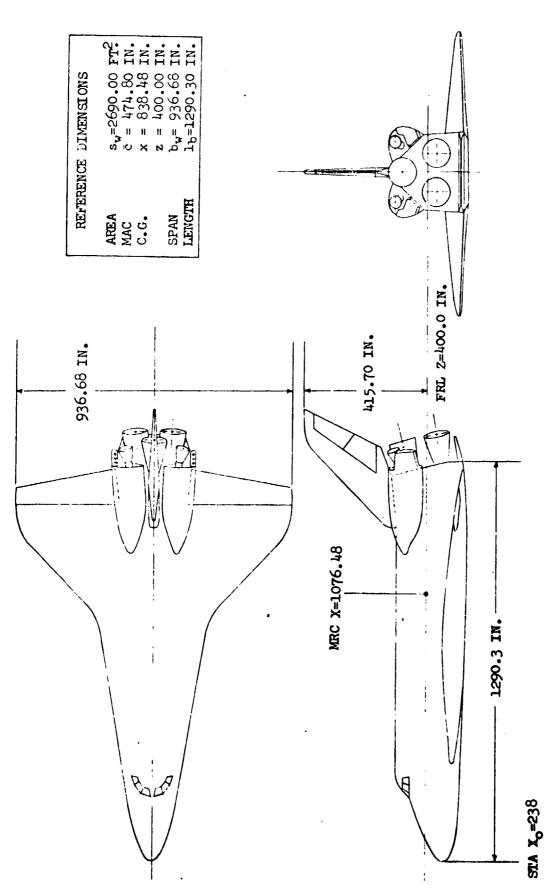
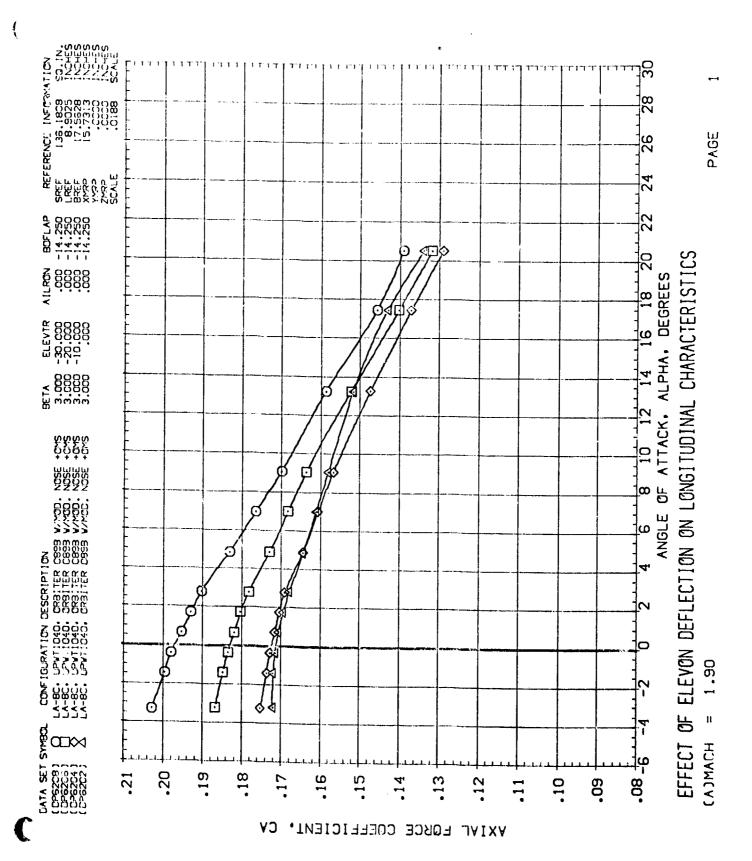


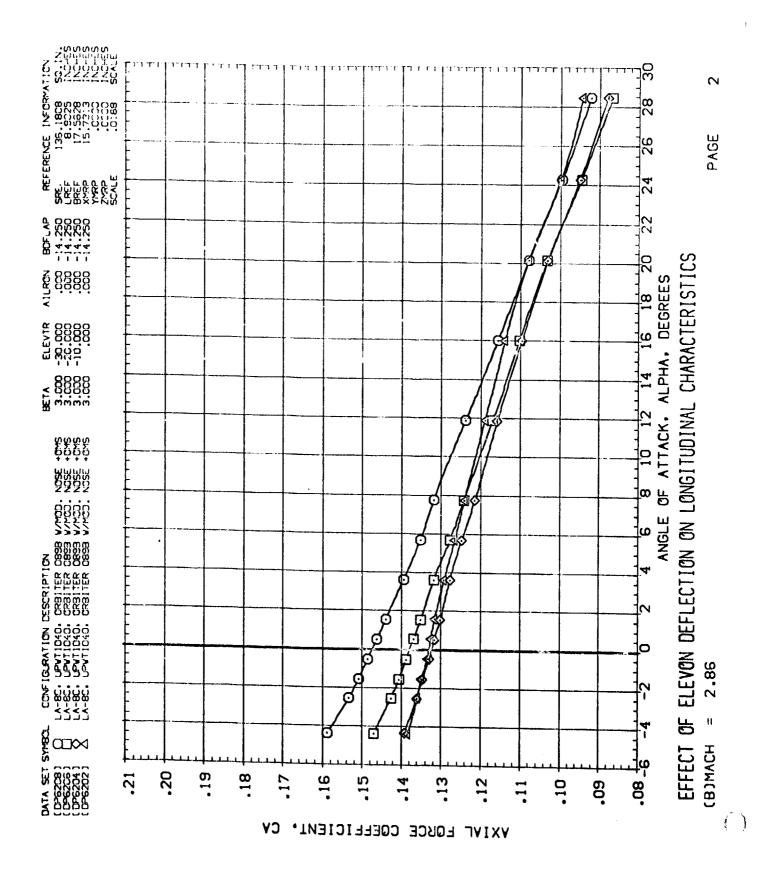
Figure 2. - SSV Orbiter Configuration.

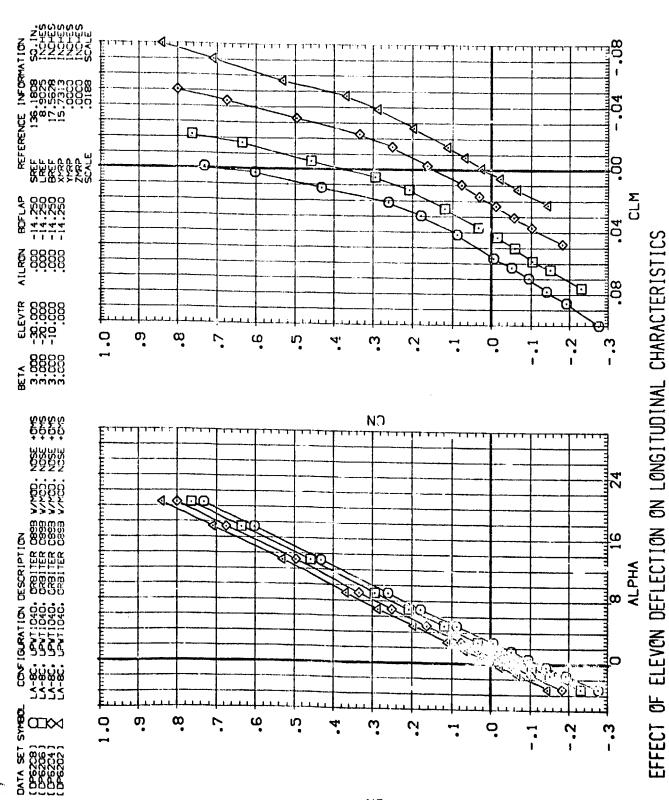
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DATA FIGURES

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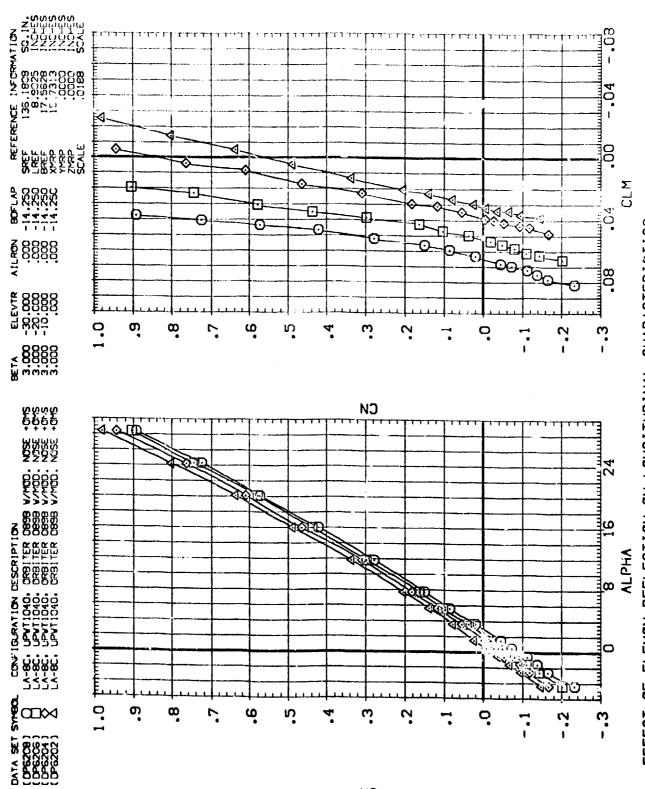
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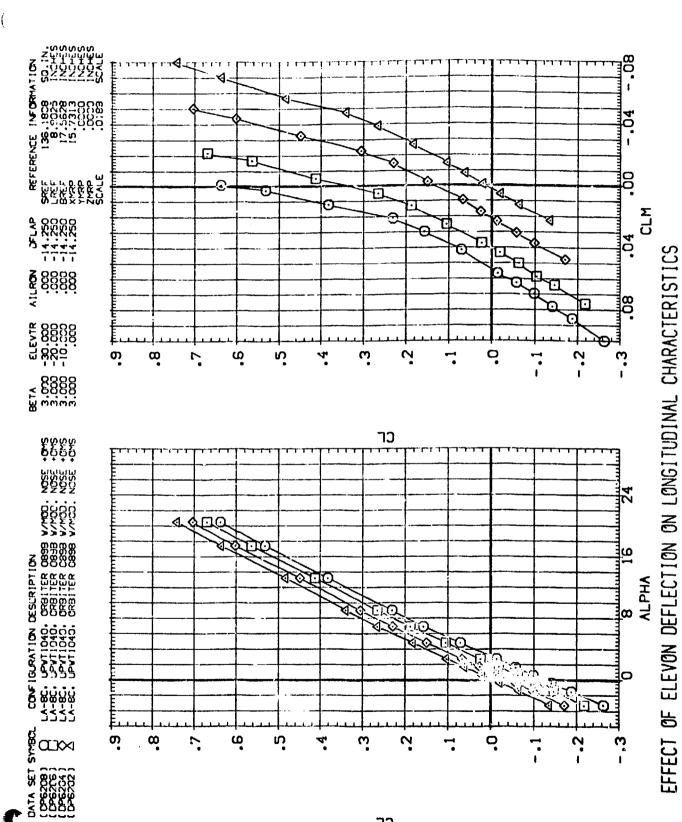
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EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS (B)MACH

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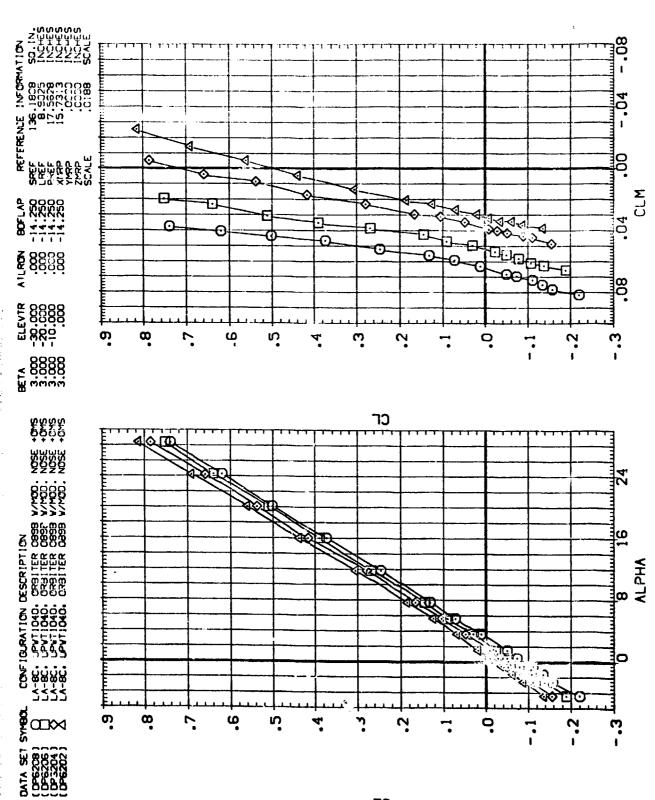


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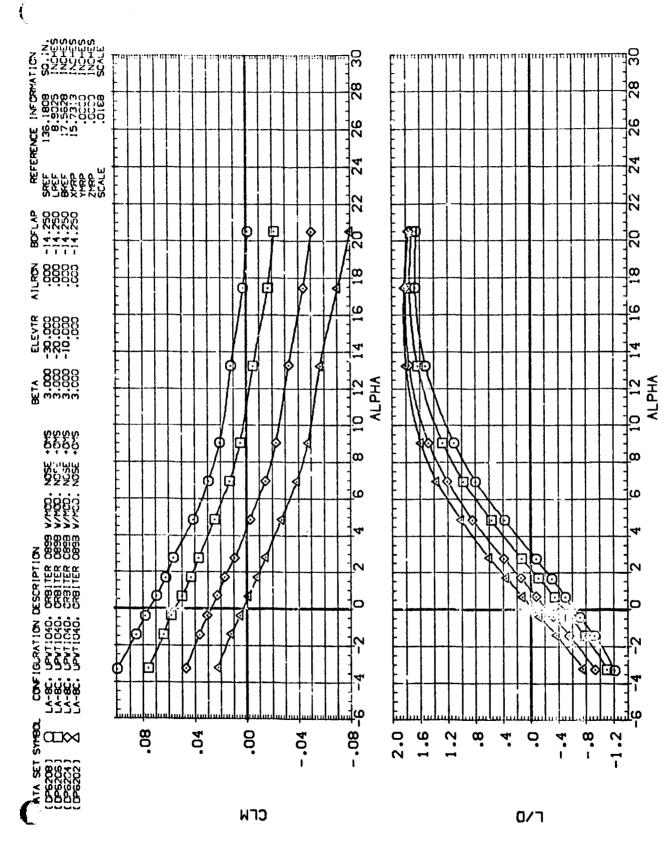
1.90

(A)MACH



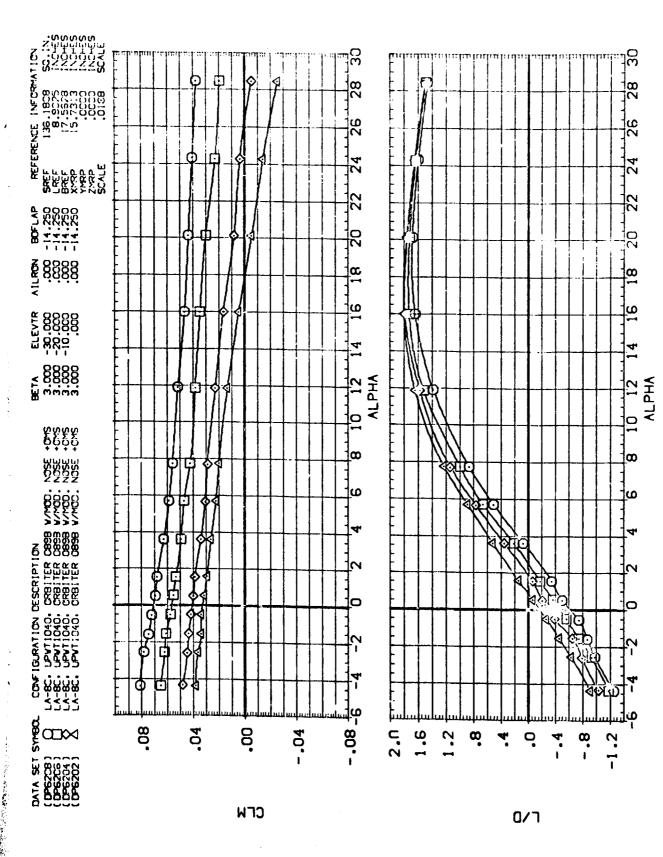
ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS 2.86 EFFECT OF (B)MACH

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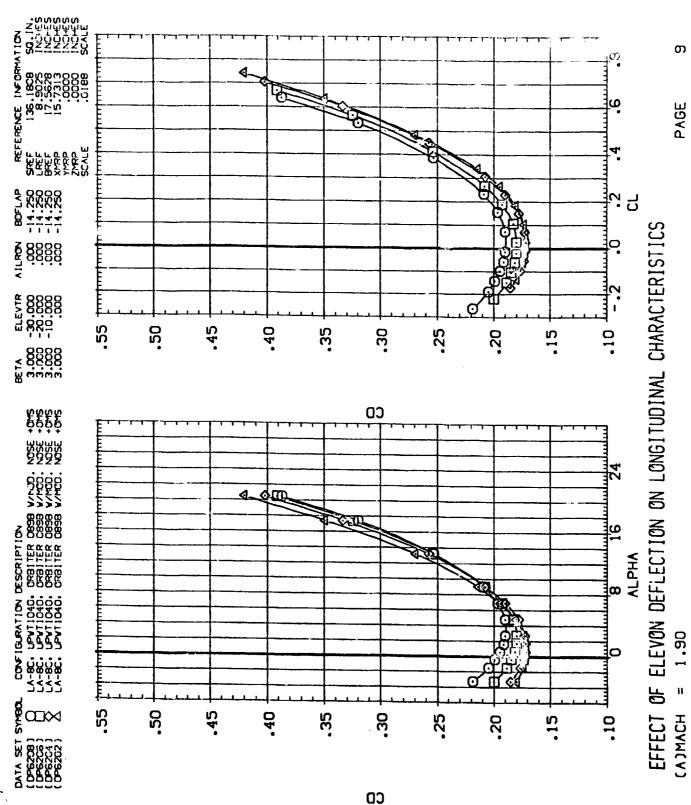
EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTIC 1.90 CAJMACH

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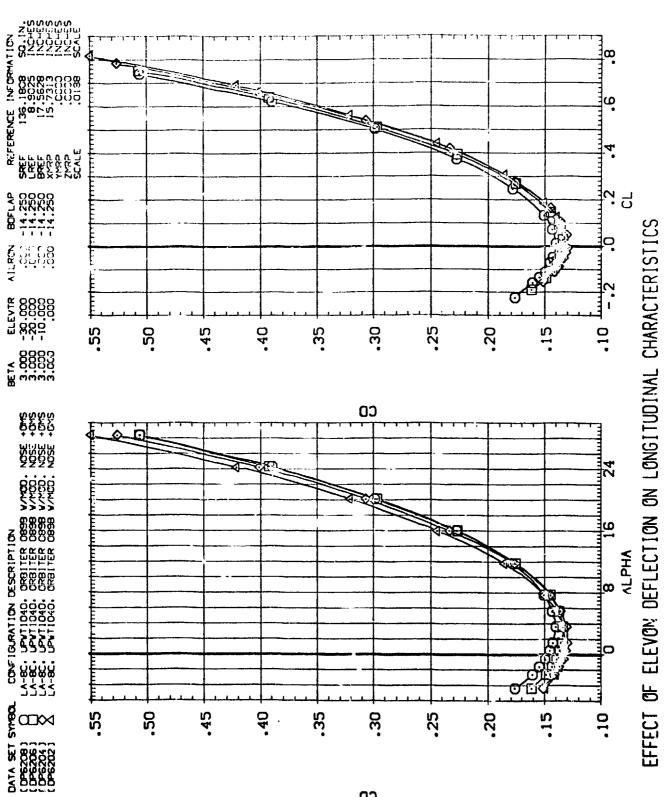


ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS **EFFECT** (B)MACH

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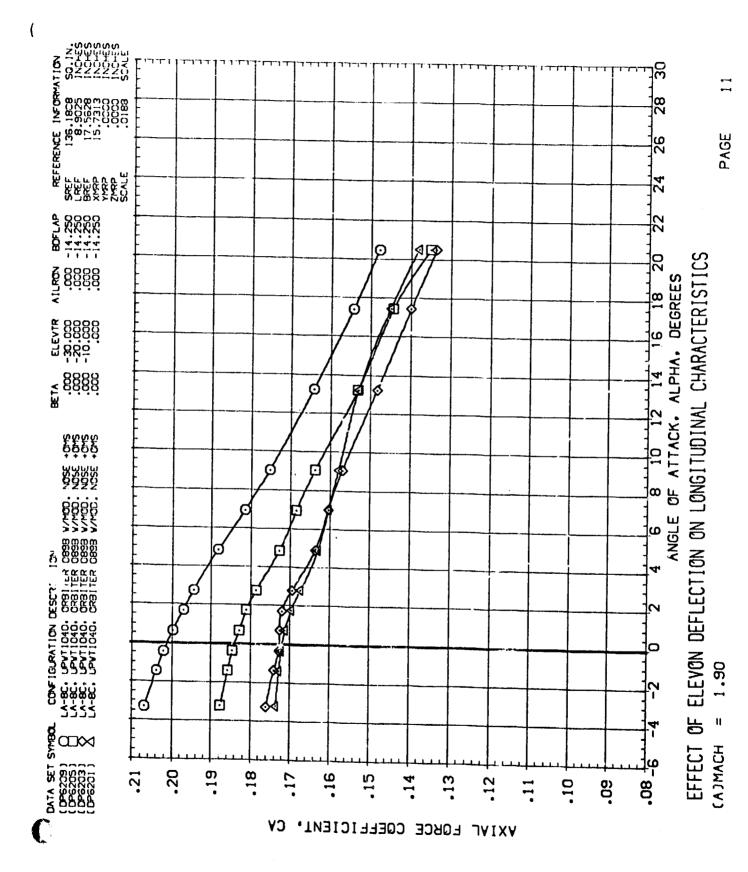
(B)MACH

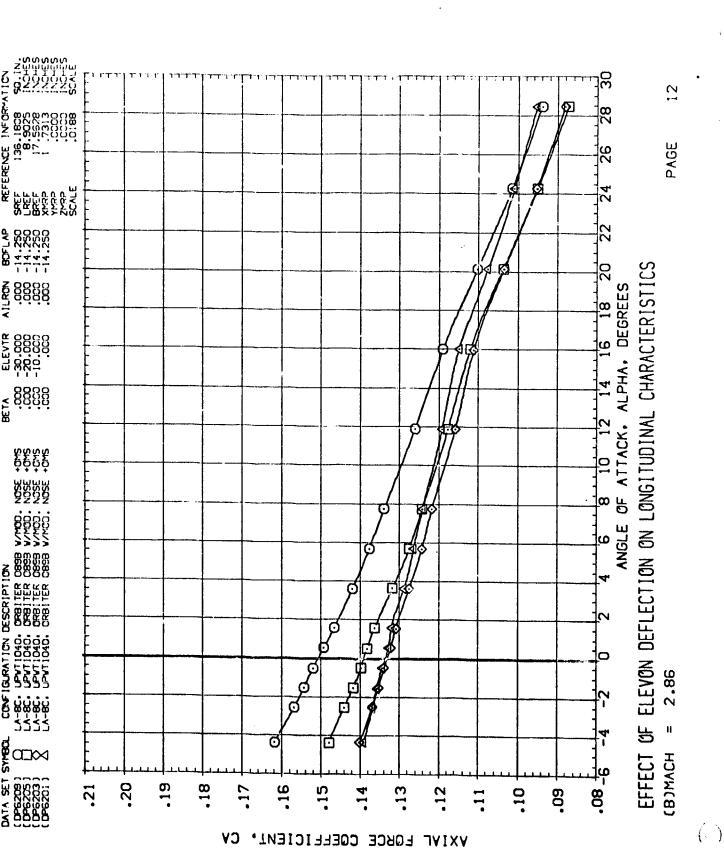
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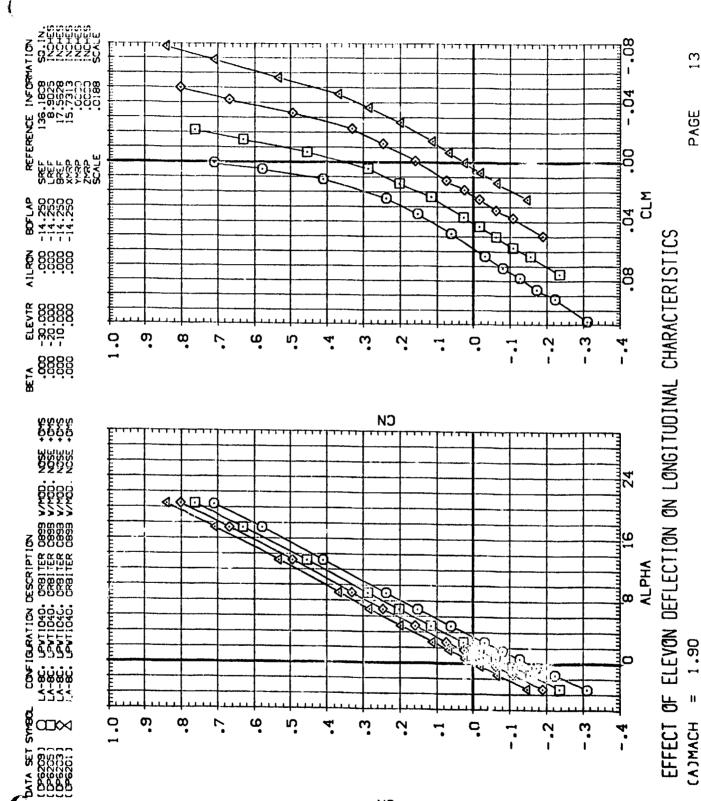
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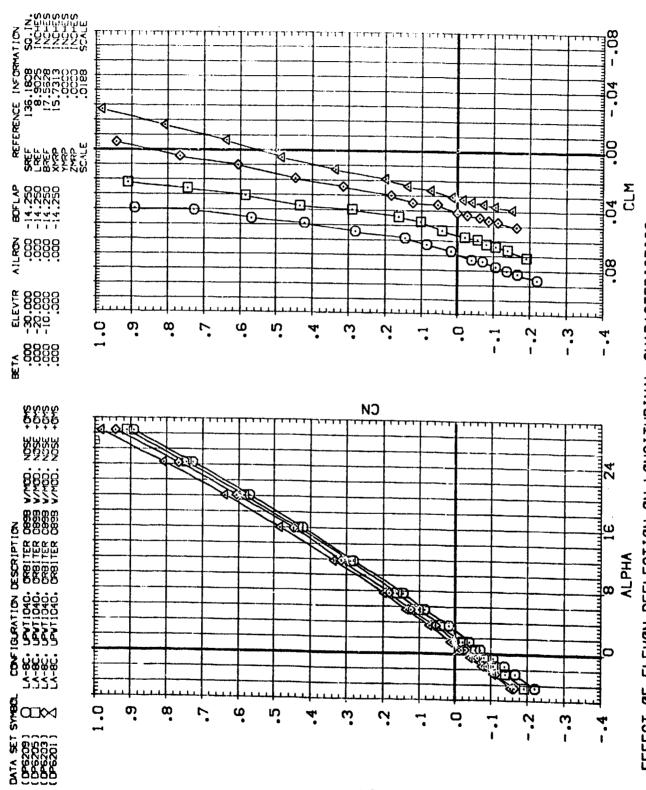
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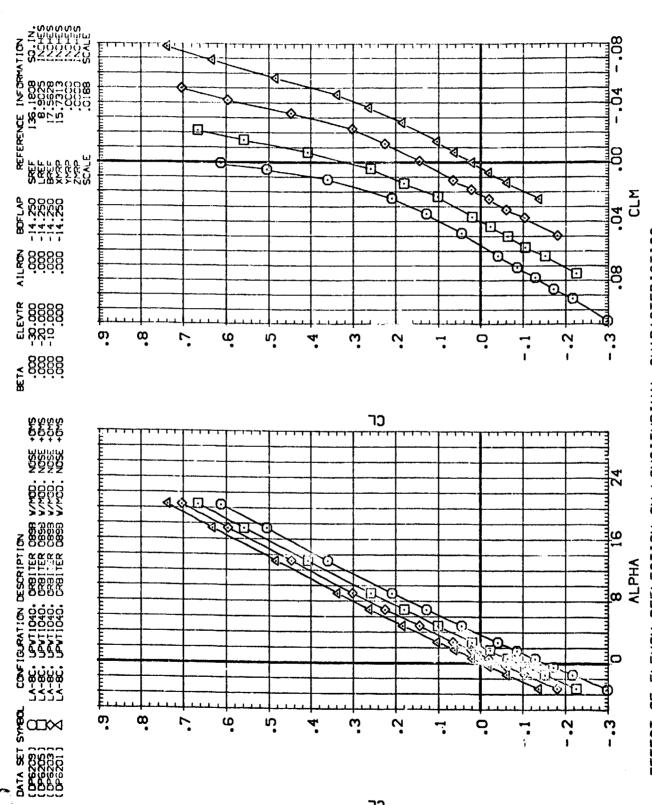
33



ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS 2.86 EFFECT (B)MACH

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ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

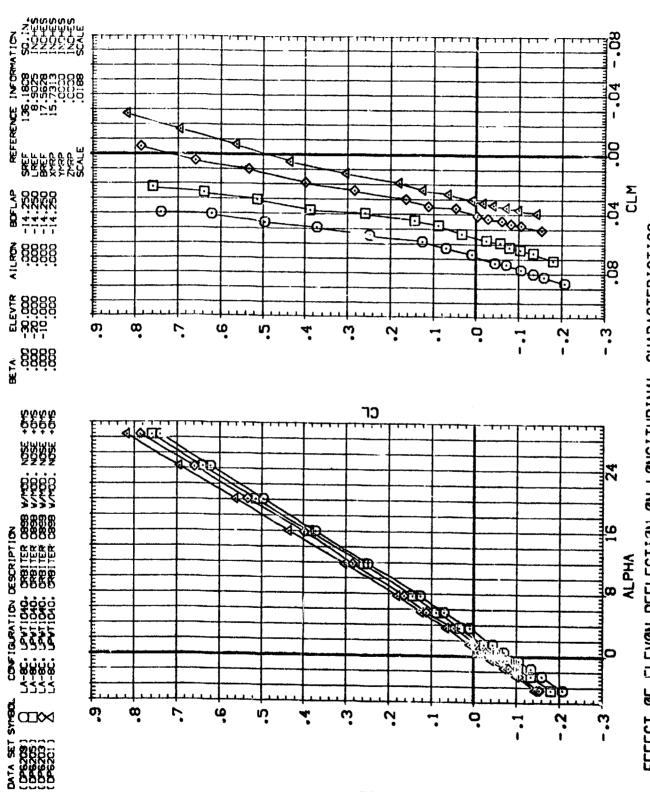
1.90

(A)MACH

EFFECT OF

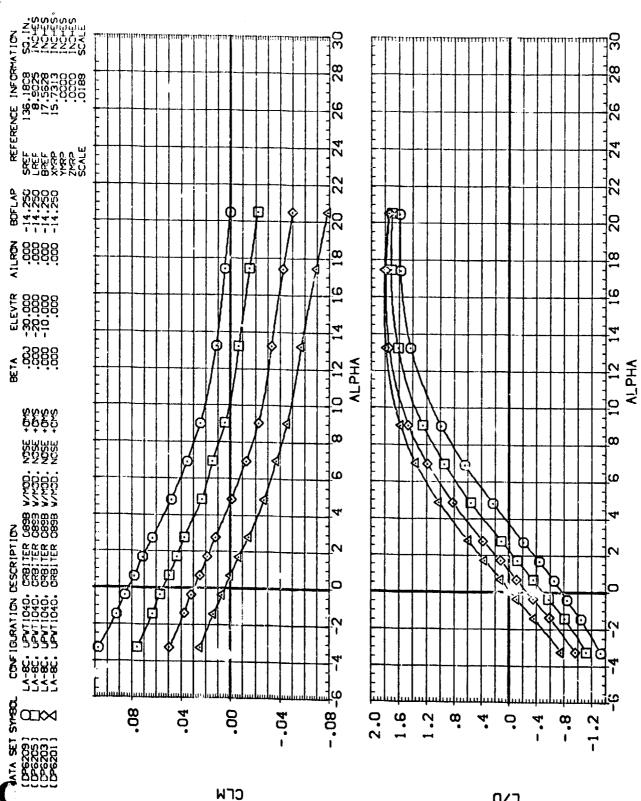
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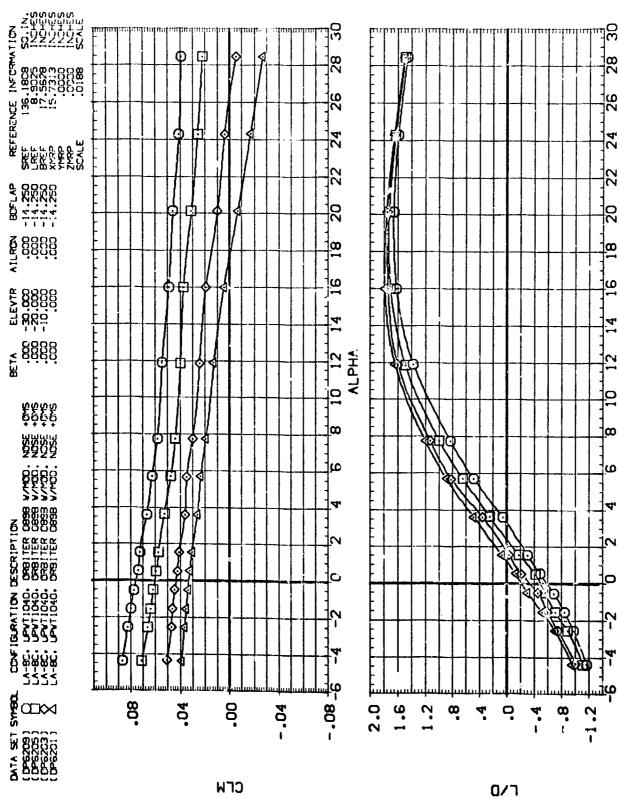


EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS (B)MACH

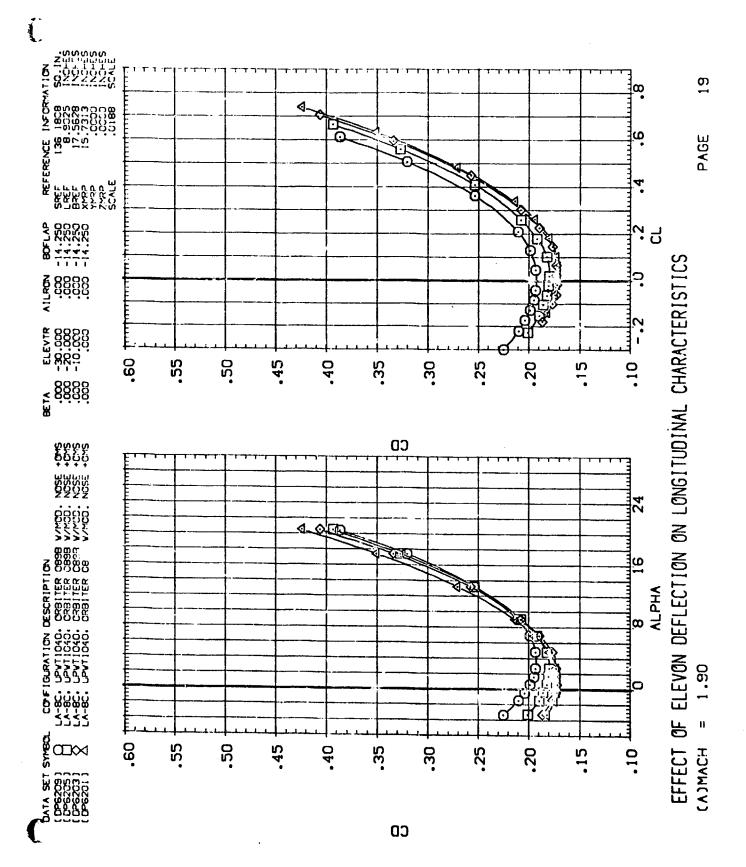
18

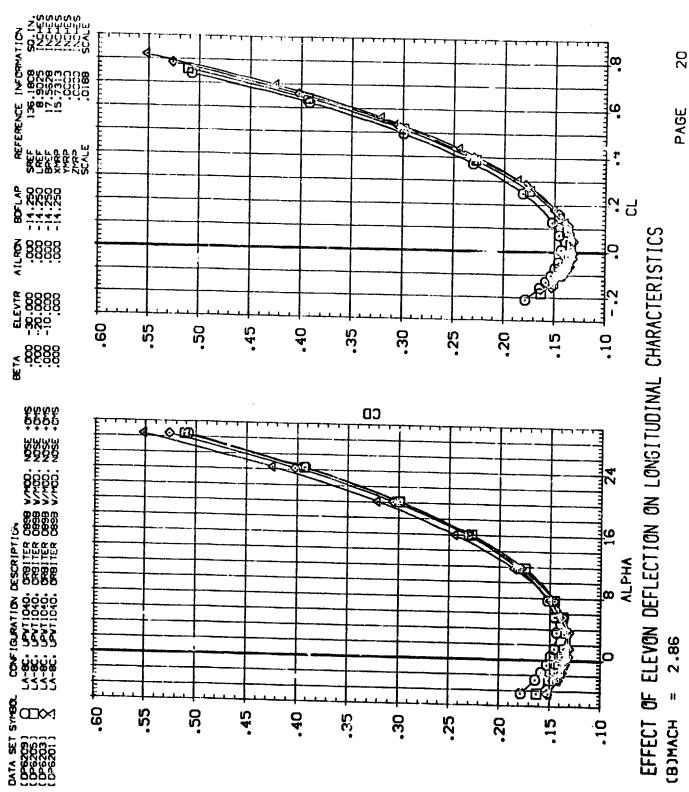


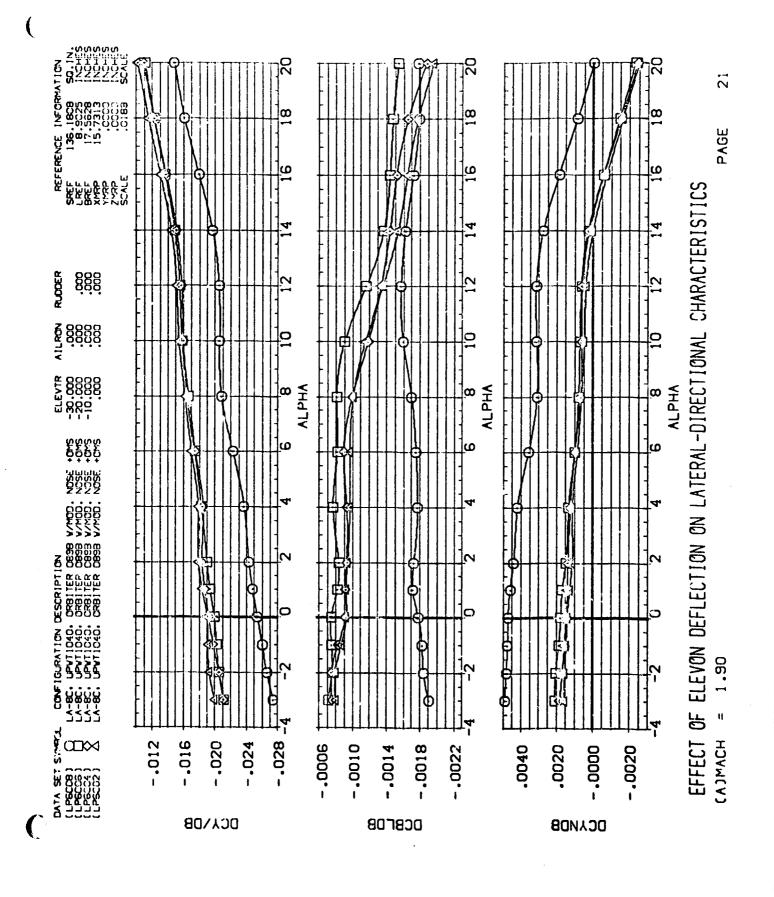
OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS 1.90 **EFFECT** (A)MACH

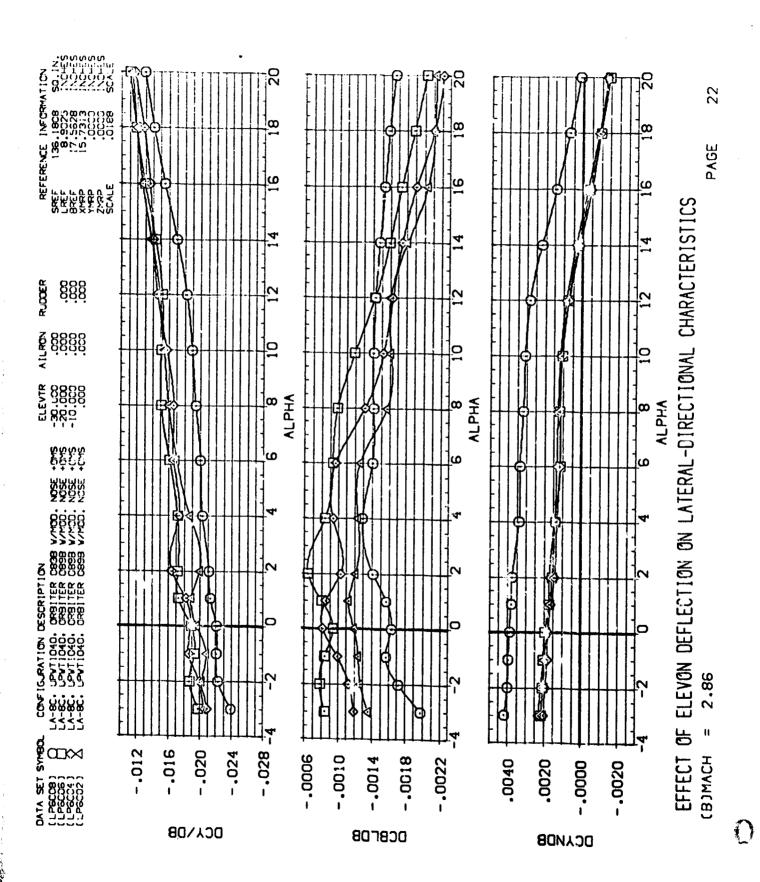


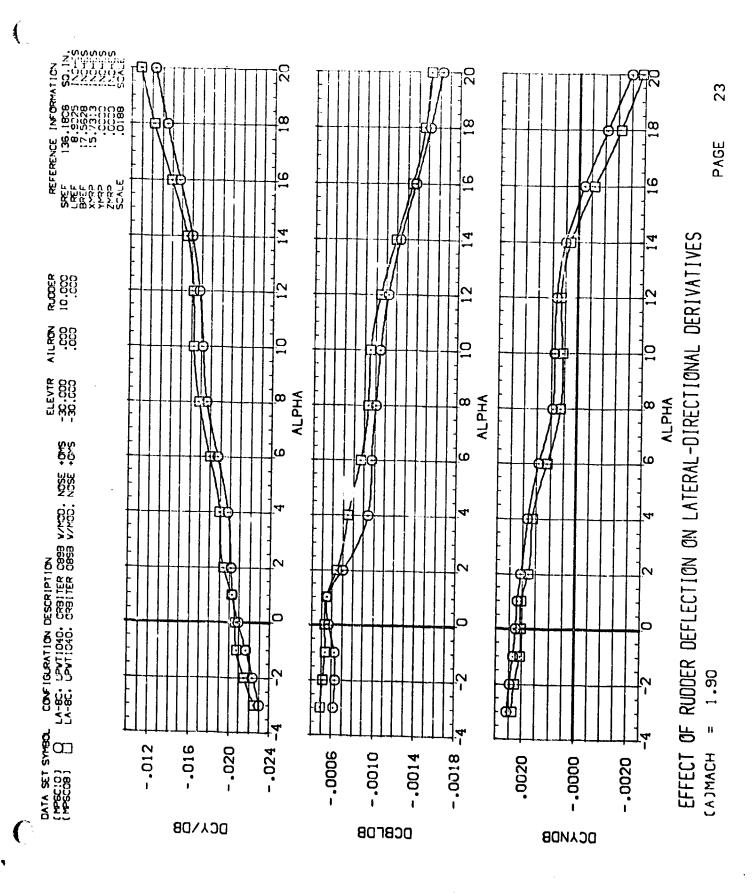
EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

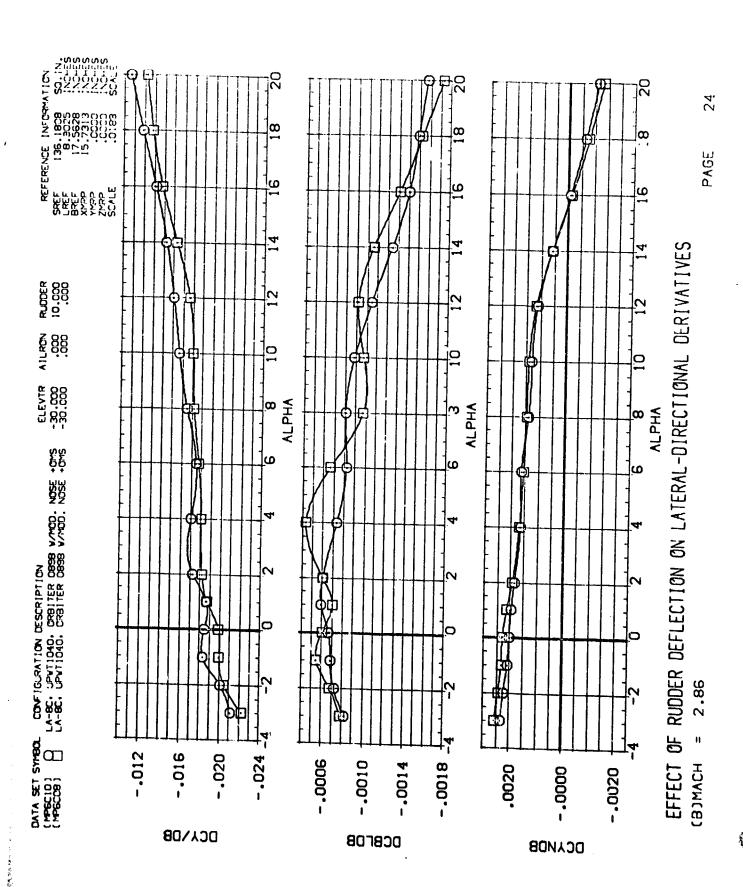


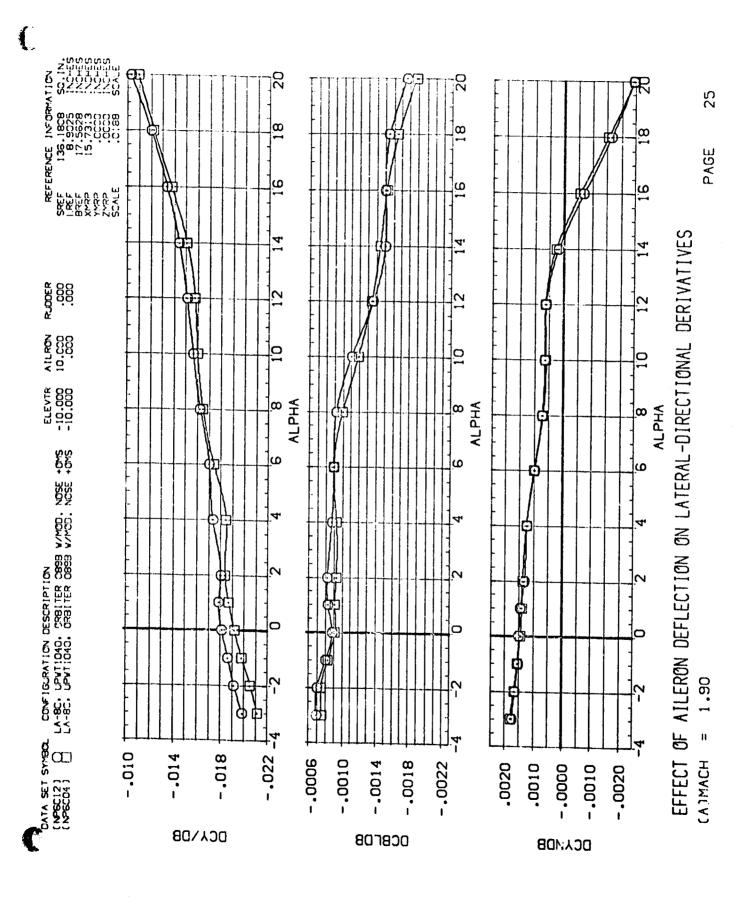


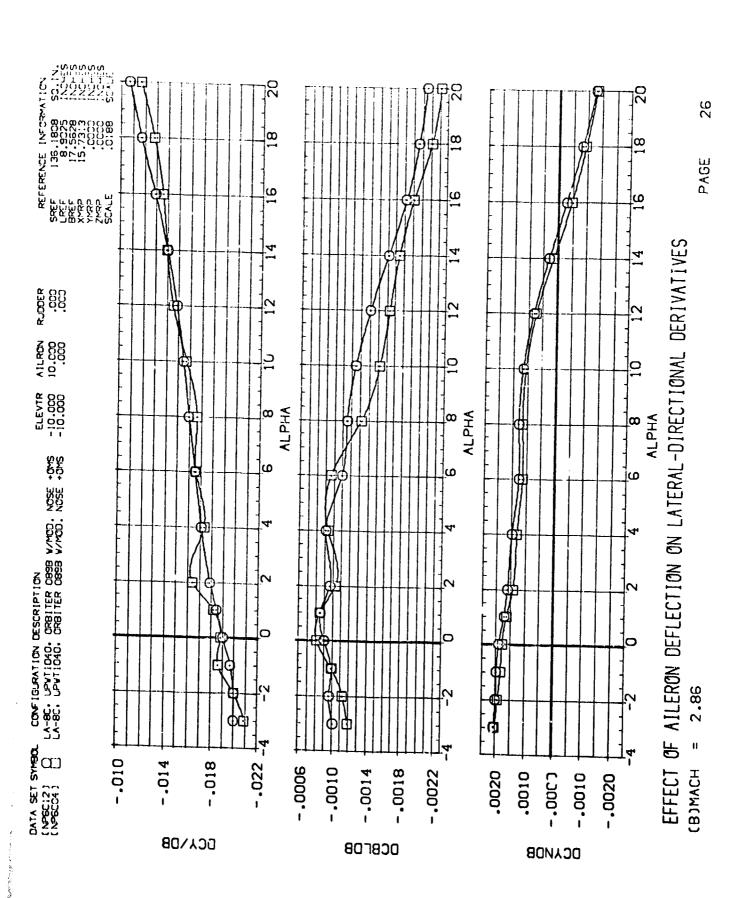


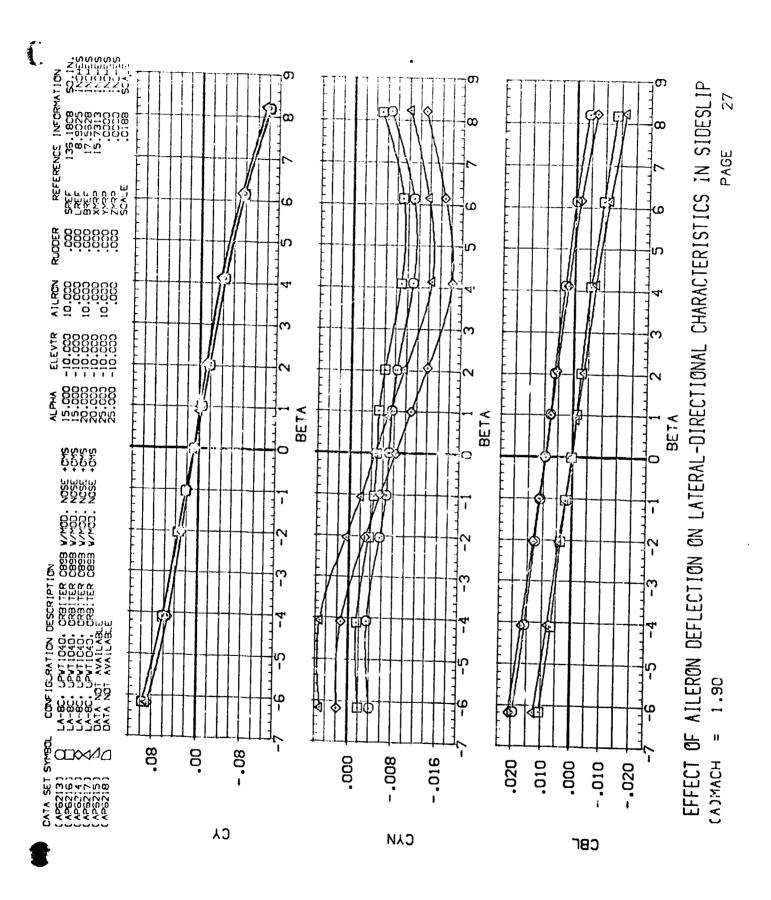


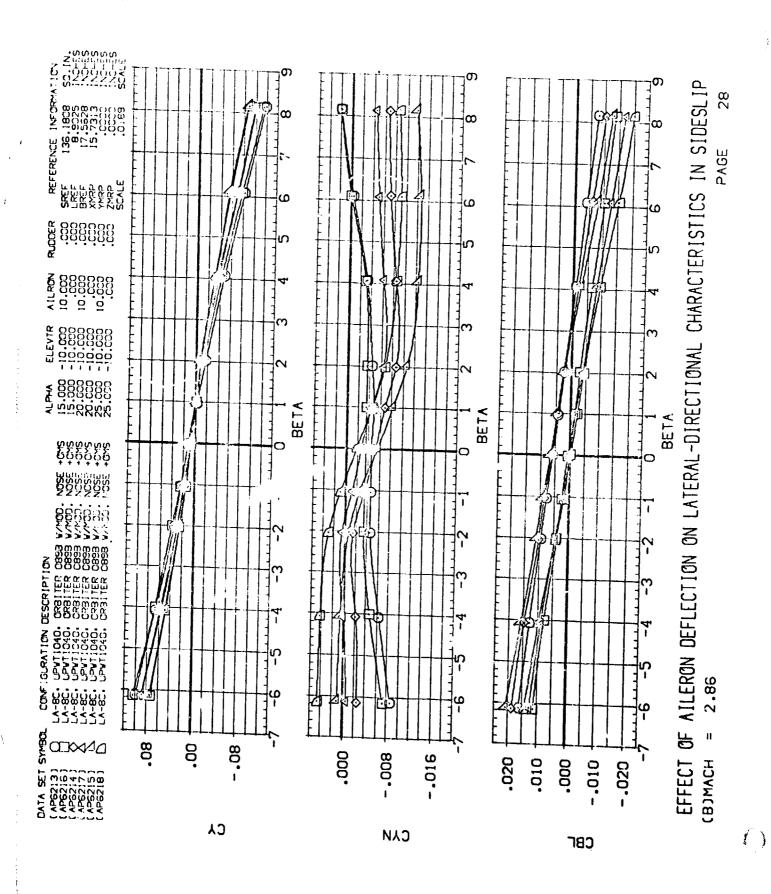


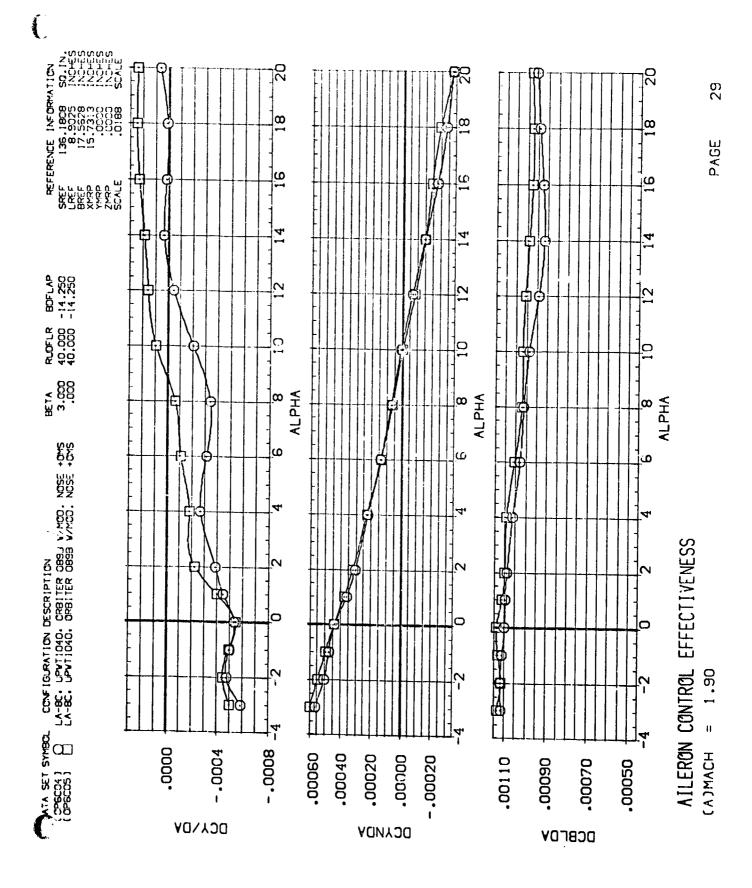




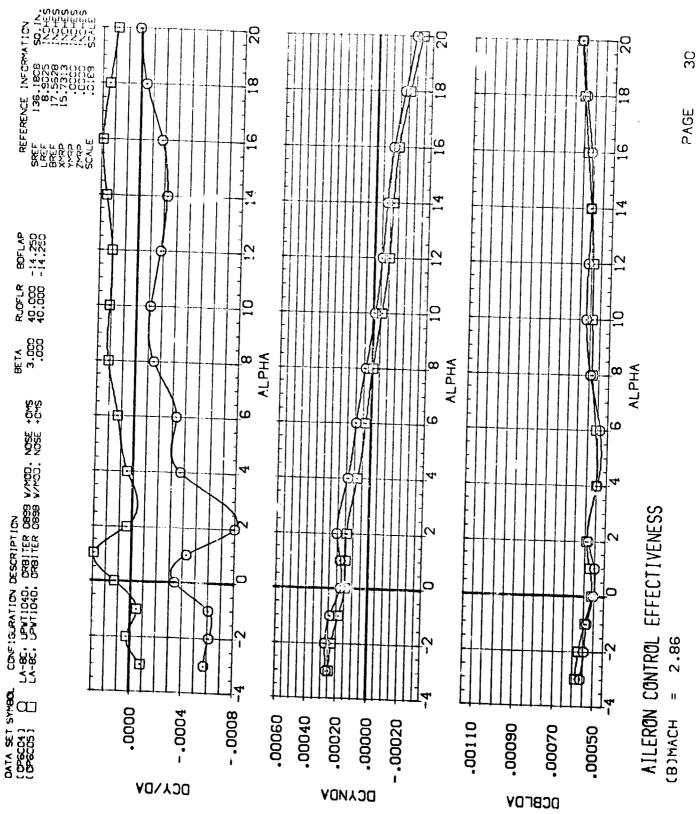


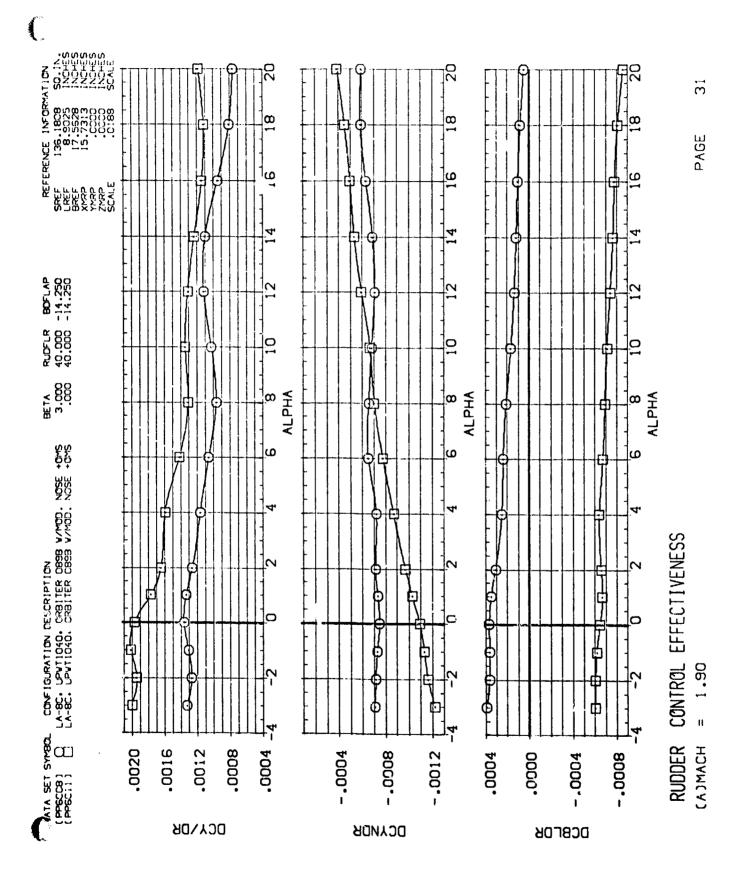


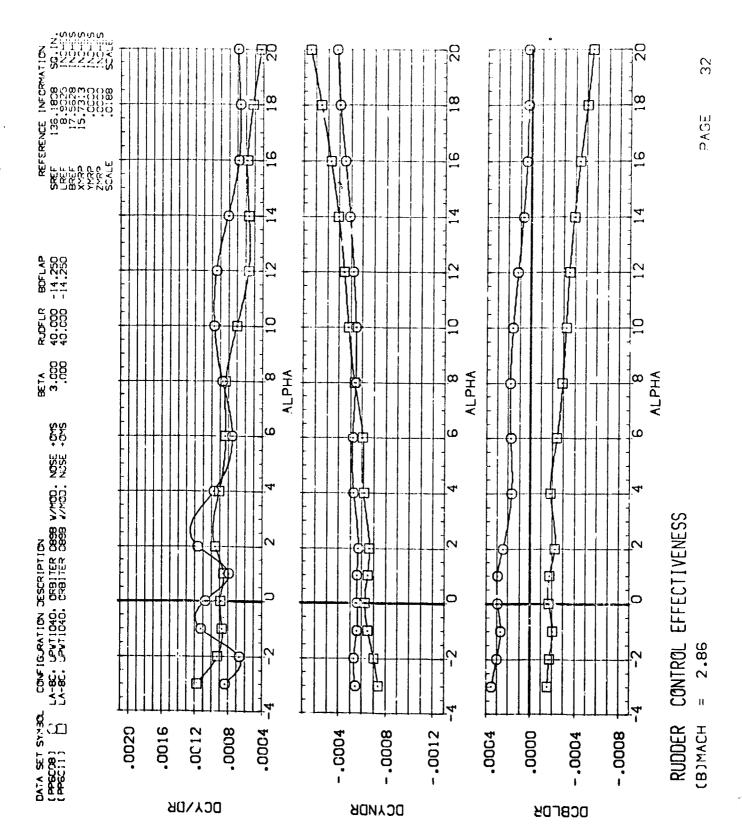




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APPENDIX
TABULATED SOURCE DATA

Plotted dava tabulations are available from DMS on request.

PACE

SAEF : LREF : BAEF :: SCALE ::

MACH			ક	ర	£	ĕ	NA	Շ	CPB1	CPB2	CPC
1.900			14765	11/361	.02101	.00048	00451	.01305	22292	.26144	24432
1.900			.06/16	.17274	.01183	.00035	-,00469	.01243	22059	. 573843	-,24195
1,900	0.8	.00048	02018	17219	.00613	00000	-,00449	.01335	-,22064	.24028	24200
1.900			9/220	.1/123	1,000.	.00033	00436	.01269	-,220,79	.24/69	24213
1.900			.06574	.16975	-,00513	.00026	-, UN)424	.01205	2205/	.29560	24193
1.900			.11069	.16/34	01157	50000	(X)421	.01294	21/91	.36/83	24192
1.900			.19721	.16305	CH320	.082126	00409	.01244	-,21485	43070	23362
1,900			28387	.16034	-,02965	.00010	UK)426	.01187	21205	.43406	23613
1.900			.36624	.15787	-,03629	00005	0%428	.01133	20925	.43476	24130
1,900			.53138	.15298	04316	SCCOO.	00450	.01103	22248	.3230,	-,25455
1.900			,400,	.14505	-,05049	UUXIZ	()()463	.01076	-,23044	.45146	25986
1.900			.84026	.13809	-,05626	-,00057	(١٩)441	.01040	-,22517	. 65285	25/23
	CRADIENT	•	.04232	00130	00535	50000-	,0000	-, UXXX)6	88000	. 02088	00100

		5	? ?	RN/L =	3						
Ş	ALPHA	BETA	3	ð	£	헏	N.C	Շ	9.5 181	CPB2	S S
.060	-4.369	01828	15469	.13912	.03481	.00186	00486	.01474	-,09022	-,15184	-,03283
2.860	-2.565	01563	10652	.13678	.03389	.00195	-,00514	.01295	09355	15188	-,04267
960	-1.548	01697	-,07545	.13570	. ທ332ທ	.00162	-, UN48U	.01311	09356	151AB	03307
0.0	499	01775	-,04168	.13430	.03274	07100	-, UU463	.01325	09356	-,15188	, 865U
040	166.	01617	01569	.13280	.03176	.00131	-,00454	.01146	09361	15189	02956
980	1.568	-,01859	.01309	.13206	.03103	.00139	00448	.01345	09359	-,15510	112993
980	3.620	01946	.07216	.12878	. U2806	. 00141	-, 00432	.01366	13682	15511	966EU
960	5.680	01579	.13719	.12635	.02718	.00103	00430	51010.		15511	05559
3	1.131	01616	.19848	.12407	.02436	.00125	-,00402	.00943	119683	15511	06918
96	11.876	01673	.33547	.11911	.02161	.00028	-,00393	.00986	10322	-,15511	0811
0	16.011	01982	.484/2	.114/5	.01,28	SOCKED.	00312	.01046	10643	-,15832	10339
960	20.149	02123	.63793	.10740	.00992	00024	00214	. U0918	10044	16153	-,10360
9	24.309	02036	. 80857	.10082	.00405	00053	-,00152	.00698	10323	15511	12277
040	26.480	02183	.98175	52460.	-,00159	-, 000v6	-,000,4	.00667	09683	14869	122//
-	CRADIENT	-,00024	.02850	0012/	00081	CKKKD	60000.	00011	-,00062	00047	COOCO .

LA-8C, UPWT1040, ORBITER 0898 W/HOD. NOSE +OMS

U				(RF65	(RP6202) (15 AUC /3)	~ C
# 130-1800 50-1N, XMRP = 13-30-30 INCHES # 5.000 ELEVTR = 3.000 ELEVTR = 6.5023 INCHES YMRP = .0000 INCHES # ALLRON = .000 BDFLAP = # 17-30-20 INCHES ZMRP = .000 INCHES # 17-30-20 INCHES # .000 BDFLAP = .0000 BDFLAP	אבינאכתב טי	ATA		PARAMETRI	C DATA	
			TACHES INCHES	7A = 3.000 RON = .000 DER = .000	ELEVTR = BOFLAP = RUDFLR =	.000

	BETA	5	ð	5	ĕ	N.	č		8
-3.212	3.05335	14615	11/210	01010	101171		;	;	30,
107	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			70000	C6100.	1925.	(14/72	21/22	.19254
	3.03144	06/45	1719	.01043	-,(10216	00090	- D4424	10010	
0.6	3.050.6	02236	117150	2445	1000	20000	200	CD613.	. 765333
\$	400040	3		7	COM	- LAUS	04439	22248	.16073
	50000	102201	37,000	.000	(30245	- 00103	04350	- 22242	64.
1.735	3.09006	.06599	116941	- (1)	- 137264				£000T.
0	A 0.400.				00 Jun 1	-100133	04194	21989	.18164
	63680	1111.	.16/88	01169	0025/	00134	041/9	21.26	19949
4.657	3.04908	.1956	.1643.	02164	- INTRA	0.000			3636
50.4	A DAVAGO	9000			905000	1. truit / 8	0.040	21201	.20819
		160031	10114	03106	00265	0026/	03848	20671	10076
9.049	3.09058	36673	15603	03770	ACKUM -	- (2022)			
13.94	A CARD.	4.44			2000	*CCTA1.	9,500.1	20406	.39166
		20100	0/101.	04265	00439	2.2.2.	-,03348	2093A	48.33
17.4	3.06158	.1029	.14295	-,05189	(1)450	1000			
417.02	10001					CCETA	*2020.	22330	.60422
		3	.15383	co	(2) 00 5	01309	01929	21004	. 1707.
SADIENT SADIENT	- 00051	,04237	760000	* ONWAY	9,77,7	, ,,,,,,,			

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9	-4. 3%	- CO.				,	-	5	Š	CP82	t
ł		2000	.14695	13834	.03436	-, 00193	.00103	- 05465			
2	-2.532	5.010.0	00000					00000	DI SELS	15192	ָּי. י
,			03-60	1336	.03388	00210	.000	4674G-	1,0400	. 070	
2	-1.530	3.02114	06566	13487	1,010	aracra) -				1.011	•
q	-	100000	1			ירעוכרום	. 47.63	(34883	09669	-,11192	-
ŀ	•	3.05561	-, 03663	.13338	.03296	00206	1000	0,69,0			
Q	. 933	3.01937	00817	1306	78.000	1,43,000			01001	15192	-
	,				001013	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0000	CO440	10012	-15193	-
,		3.05039	6/22/0	.13157	,02998	07215	- (DOM)	- (745.84	40000		•
0	7.00	3.02033	17770	100	0000	44000		996	01001	.15513	-
•	8			;	10000	CCJINI.	-,1,5,61	-,(14393	10010	15513	-
		1000	06/61.	12646	.02613	00266	76(XX) -	4017			
0	8.:	3.01658	203.89	12400	02400	******			1111111	-,15513	
_	***				966300	14031	(47.04	03904	10311	15508	-
		2.01030	. 23638	.11885	. ((2219	(3)456	00199	03511	- 10340	0000	•
.	16.010	3.01885	488674	11385	116,10.	7.54(8)	41.4			67000	?
2.000	20,150	3.09450	4444	.0.0.		******	2444	02/63	10636	16152	09/11
			00000	16/01.	12110		00695	024/9	10b40	04140	
3	24.299	3.02/01	. 80324	()666()	00000	1907	00000			35.101.	•
0	20.475	3,00334	100.0	Ş		20.00	6.701'11'	021/2	10350	15510	?
		666	060/6	119425	.00041	()()844	00726	0192/	F. 096.4	4007	
_	GRADIENT	00051	.02615	00112	#/UUU -	. (27.70)	-			63341.	.16031

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REFERENCE DATA

(RP6203) (15 AUG /3) LA-8C, UPWT1040, ORBITER 0898 W/NOD, NOSE +CHS TABULATED SQURCE DATA FOR LA-8C (LARC UPWT 1040)

PARAMETRIC DATA

H	136,1808 59.1	÷	XX40 ==	15.963	15.9638 INCHES				BETA =	000.	ELEVTR =	-10.000
n	8.9025 INCH	ES	THEIP =	0000	INCHES				AILRON =	000.	BDFLAP =	-14.250
BREF =	17.5628 INCH	ES	ZMRP =	0000	INCHES				RUCOER =	.000	RUDFLR =	40,000
<u>"</u>	.0188 SCAL	:ALE							۳ ۲	5.290	61-LOC =	2.000
		œ	RUN NO.	10/ 0	RN/L =	1.50 6	GRADIENT INTERVAL = -5.007 5.00	:VAL = -5.0	00.6 /0			
Š	ALPHA	BETA	3	_	ర	3	ĕ	N.	Շ	CPB1	CPB2	S
1.900	-3.263	0/100	•	19024	00971.	.(34443	_	-,00516	.01446	19005	-,27997	-,24041
1.900	-1.362	.00243	'	.10717	.17410	.03474		96700	.01327	18574	2/63/	-,23364
1.900	365	.00273	•	.0618/	11219	.03039		-, UCA86	.0126	1/992	2/610	-,22813
1.900	964.	.00246	•	.01650	17259	.02444		00458	.01203	16943	2/619	22559
1.900	1.715	COMO4		.02668	117210	.01916		-,00427	.01133	-,16410	2/619	
1.900	2.7.8	0200		7350	16957	.01381		00453	.01213	-,16155	2/230	
1.900	4.8/0	.00284		5640	.16373	.00324		-,00455	01150	-,16287	-,27037	
1.900	4.6.9	.00301		4613	.16044	-,00623		-,00448	.01108	14992	27705	-,21639
006.1	9.047	.00376		3141	.15695	-,01393		00451	.01052	-,12652	27458	-,21915
300.1	13,252	.00638		9399	.148")	U2024		-, 00493	14600.	10795	26924	-,22438
006.1	17,440	76600		.66833	. 41.	02506	,00034	-,00,485	52600.	-,10984	26690	23188
006.1	20.520	.00518		.00124	.13369	02922		00458	esecu.	-,14199	-,26909	23/41
	CRADIENT	CENTRO.		. 6621	00138	-, D0503	100000	81,000	-,00036	50400	BO3108	.00248

.12080 -12083 -12394 -12397 -12397 -12080 -12080 -11757 -11767 -11767 -11767 -11767 -11767 -11767 -11767 -11767 -11767 -.13966 -.13346 -.00014 CPB2 -.15311 -.15318 -.15310 -.15310 -.15313 -.15313 -.15313 -.15313 -.15305 -.14662 .00000 CPB1 .05525 .00723 -.01165 -.01808 ..02131 -.01304 .01032 .05098 -.02098 -.04664 -.04664 .01565 .01406 .01406 .01229 .01346 .01346 .01346 .01391 .01423 .01423 .01423 CYN
-, 00493
-, 00492
-, 00466
-, 00466
-, 00447
-, 00412
-, 00193
-, 00109 CBL ... W1240 ... W1240 ... W1240 ... W1154 ... W1154 ... W1154 ... W1154 ... W1155 ... W1155 ... W1155 ... W1156 .. .04438 .04438 .04415 .04280 .04280 .03747 .03788 .03483 .03257 .03085 CA 114013 113683 11358 11358 11378 11273 11273 11116 11116 11116 11116 11116 111116 11 ...16479 -..1822 -..08616 -..0854 -..0028 ...00328 ...18238 ...18238 ...18238 ...18238 ...18238 .,6657 .94244 .02756 PETA
-.01693
-.02030
-.01760
-.01760
-.01904
-.02039
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-.02262
-.02262 11.866 15.969 24.296 28.466 68ADIENT ALPHA -4.352 -2.338 -1.339 -2.4911 .327 1.552 3.610 5.674 1.738

COLOR OF THE PROPERTY OF THE P

1.50 GRADIENT INTERVAL = -5.007 5.00

RUN NO. 14/ 0

# 135-15CB 54.1N, YMPP = 13-30.39 INCRES # 6.2022 INCRES YMPP = .0000 INCRES # 1.1-30.58 INCRES YMPP = .0000 INCRES # 1.1-30.5 SCALE RAW NO. 11/ 0 RN/L = 1.1-30. GRADIENT INTERVAL = -5.00/ 5.00 ***ALTHAL BETA													
135-1606 36.1N, NRF = 13-90.0 INCHES 15-90.0 15-90		REFE	RENCE DA	*							PARAMETRIC DATA	4146	
### 1.3422 INCHES 1967 = 1.0000 INCHES RUDGE ### 1.3422 INCHES 2787 = .0000 INCHES RUDGE ### 1.3422 INCHES 2787 = .0000 INCHES RUDGE ### 1.3423 INCHES 2787 = .0000 INCHES RUDGE ### 1.3424 2.03430 -1.3524 -1.352 -1.0313 -1.0049 -1.0491 ### 1.3424 2.03430 -1.3524 -1.352 -1.0313 -1.0011 -1.0491 ### 1.3424 2.03430 -1.3524 -1.0323 -1.0313 -1.0311 -1.0491 ### 1.3424 2.03430 -1.3524 -1.0323 -1.0313 -1.0311 -1.0491 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0311 -1.0491 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0311 -1.0491 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0311 -1.0491 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0313 -1.0313 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0313 -1.0313 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0313 -1.0313 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0313 -1.0313 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0313 -1.0313 -1.0313 ### 1.3424 2.03325 -1.0332 -1.0332 -1.0332 -1.0332 -1.0332 ### 1.3424 -1.0332 -1.0332 -1.0332 -1.0332 -1.0332 -1.0332 ### 1.3424 -1.0332 -1.033		134. 1656	9	9	(<u> </u>	
1.1.252 INCRES TARK 2 10000 INCRES				L .	H	. 9658 INCHES					3.000	ELEVTR =	-10 000
Color Colo		cane a	THE LANGE			DOOD INCHES					COO		246
### ### ### ### ### ### ### ### ### ##		17.3628	INCHES	Ž.		OUGO INCHES					000		062.41-
### ### ### ### ### ### ### ### ### ##		.0166	SCALE							į	Name :		40,000
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## #### BETA CN				3				ADIENT INTE	RVAL = -5.	00.4 /00			
1.14 3.03109 1854 .1722 .00124 0014 0004 0044 0	1	ALPHA	BET	.<	₹	5	2	ŧ	į	į			
1.404 3.03581 -11024 -11025 -10105 -10009 -10009 -10404 -10105 -	1.900	•		60,	16264	40474		9	E .	ל	98	CPB2	S D
1.11 3.03496 057.22 .17262 .101101 00009 00019	1.900			561	100	6484	CZZPO.	-,10136	-,00049	-, 04979	15028	28253	24292
1,116 3,03326 -,00032 -,00039 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,00110 -,0498 -,0028	1.900		3.03	5	04.40		Jecon.	001/6	,600a.	04742	13138	28235	24266
1.7.16 3.03318 .02004 .17034 .02237001990011004499 2.7.87 3.03308 .02004 .17034 .01166000200012804310 3.03329 .18393 .18447 .00180000200012803308 3.0329 .28497 .18047 .01189000200012803908 13.200 3.0342 .48094 .1804700187002190032003908 13.200 3.0342 .48094 .1804700180001280033003908 13.200 3.0343 .89396 .136940021000210002100032003908 17.434 3.0343 .48390 .1369402040002100021002040 2.034 3.0343 .12040 .136940204000210002100204002040 2.034 3.0343 .120400224020400204002014 .02040	1.900			1	26760-	292/11	.02879	00191	00117	04584	-,12316	28223	24252
2.767 3.03300 0.0794 0.0706000200013000411 0.0020 0.00130 0.0794 0.0110 0.0010000020 0.00100 0.0794 0.01100 0.00100 0.00100 0.010100 0.	1.900			} :	50103	17138	,02237	00199	00110	-,04495	11522	28223	- 24242
### 1993 1993 1993 1994 1996	1.900			9 5	, ecc.	17054	.01766	-,00208	00133	04411	11261	28224	24044
### 1993 - 1993 - 1964	1.900			3 3	100 h	.16901	.01118	DOZU14	00128	04398	11537	P.2822	24940
13.202 3.03452 3.3349 3.14024 -3.00216 -3.00216 -3.00342 -3.03452 -3.0	\$		•		.16595	.1644	.00160	00200	00176	04306	12342	27703	24(2)2
13.260			יי	C :	.24997	.16065	00817	00218	00263	03986	10891		3000
13.250 3.03/25 .49536 .14/2401960003820041300514 20.554 3.03356 .40024 .1290002940004510092702694 20.554 3.03356 .40236003100031000314 .0003201309 20.554 3.03356 .402360031000314 .0003200310 20.554 3.0356025413922 .043600032 .0004304916 20.556 3.035611740 .13522 .043600032 .0004304916 20.556 3.035611740 .1352 .0403100032 .0004304916 20.556 3.035611740 .13522 .043600032 .0004304326 20.556 3.035610251 .1352 .0403100032 .0004304326 20.556 3.035600243 .1356 .0336000130003500435 20.556 3.035600473 .1362 .00056000190004300326 20.556 3.035600473 .135600019000190004900432 20.556 3.035600473 .135600166000190004900346 20.556 3.035600473 .135600370001690001900452 20.556 3.035600473 .135600370001690001900345 20.556 3.035600473 .135600370001690001900376 20.556 3.035600472 .1351400356001690001900376 20.556 3.035600472 .135140035900359003590035900359 20.556 3.035600472 .1037900359003590035900359 20.556 3.03560045 .105600359		C .		25	.33372	15671	01394	00287	00332	LIGHTO -	10021	0443	240.5
### 20.04631 .67.369 .13697 .1026110045100327 .102694 .122694 .122694 .12269400334 .00327 .102694 .10		13.240	3.037	52	.49638	.14724	01960	-,00382	(3)413	- 03444	901011	991/3	24020
### 3.03356 .00024 .129000295000559 .0130902301 #### #### #### ##### ###############	2	17.434		5	.67380	.1369/	02611	00451	- (1792)	70000	CDC11.	- 26383	23/49
### ### ### ### ### ### #### #### #### ####	200	20.524		8	.80024	.12900	1,02950	944(4)	908.00	*6030	11296	-,25585	23215
### RUN NO. 15/ 0 RN/L = 1.50 GRADIENT INTERNAL = -5.00/ 5.00 #### BETA ON CA ' CLM CBL CYN CY -4.336 3.0568116747 .13922 .0436800022 .0004304918 -1.50 3.0568202541 .13692 .0408100013000340436 -1.50 3.0568202541 .13292 .0408100013000010336 -1.50 3.0568000243 .13164 .0331600013000010322 1.54 3.0596000473 .13019 .0386400013000010322 3.00 3.0520 .05465 .12478 .03370000200001103761 -1.50 3.0520 .30024 .11560 .0330000200001103761 11.64 3.0520 .30024 .11560 .030030002000021 #################################		CRADIENT	000	9	84240	90 1141	0000	ecent.	505 th	02301	128/4	-,25315	22945
### BETA ON CA CLM CBL CYN CYN CYN CA 13922U3968UXD22UXD22UXD22UXD32U49181674713922U3968UXD22UXD22UXD23U49181590 3056260233713420UXD22UXD22UXD24U4326U4326UXD23U4326UXD32UXD34U4326UXD32UXD34U4326UXD32UXD34U3226UXD31UXD32UXD31UXD32							0.600.	0000	00014	. UCD82	.00342	56000.	.00028
ALPHA EETA ON CA ' CLM CBL CYN CY CYN CY -4.356 3.09981 -1.86447 1.3922 .04368 -1.00092 .000043 -1.04918 -1.6937 1.34610 .04127 -1.00022 .000042 -1.04918 -1			_	RUN NO.		RN/L =		DIENT INTER	VAL = -5.0	00.4 %			
-4.356 3.0598116747 .13922 .1436810032 .0004310491825.72 3.0562911740 .13510 .10412700132 .0004310491825.72 3.0562911740 .13540 .0412700113000040453404534056330564110252 .000110011300001104360453405641026430000100001043250566 3.0554110262 .13164001130010010432504526 3.0556900473 .131640014900001000010432500326 3.05564004730016900001003220032200326 3.0526700469001490032200326 3.052670032600149003260014900326 3.0526700326001490032600326 3.0526700326001490032600326 3.05267003260014900326 3.05267003260014900226 3.05267003260014900226 3.0526700326 3.0526700326001490022900229 3.05268 3.05267002290022900229 3.05268 3.0526700326004930022900229 3.05268 3.0526700326004930022900229 3.0526700326004930032900229 3.0526700326004930049300493004940004930049300493004930049300494000493004940	Ŏ	AL PHA			ē	į							
	2	1	<u> </u>	2	5 ·	5	Ð	턴	Z.	Շ	1960	CPB2	è
- 11740 - 11740 - 13410 - 04127 - 100122 - 100124 - 10434 - 11740 - 117430 - 117440 - 117430 - 117440	3		eco.	•	.16/4/	.13922	.04368	00092	.00043	04918	.UC442	1404	,
1.500 3.0362606237 .13462 .04061001130000604360436043604360436043604360436043604360436043604360436043604360436043604360444604444044		2,5.5	9.036	•	11740	.13610	.04127	-,00122	.00024	04534	A(4/00)	4004	
1.040 3.0049302261 .1329204012001130000104329 1.542 3.00541022610024102261 1.542 3.005410226900342003420034200342003420034200342003420034200342032640014000342034203264003420034203264003420034203264003420034203264003620034303262003430326200343003420034200362003430034200362003630036200363		066.1	3.0360		.09337	.13462	.04081	00113	0000-	04436	- D1 (04	1967	.16368
1.542 3.0954102629 .13164 .03918000890001504322 3.605 3.0530900473 .13019 .03864001400001503761 5.605 3.05309 .05465 .12774 .03564001690009703842 5.605 3.05240 .11696 .12774 .03504001690009703842 7.730 3.05240 .11696 .12478 .03570002880010103715 11.646 3.05257 .30624 .11580 .03108002880010103715 16.010 3.05652 .46538 .10562 .02866003990028703232 24.269 3.05432 .46538 .10549 .02412004220029302293 24.269 3.05432 .4641 .09489 .023700622006530179400577006220065301794		906.	3.0545		05261	.13292	51000.	00113	10000	10124	16,100	14900	12390
1.942 3.090900473 .13019 .036440014000065303761 .32604 3.05099 .05465 .12774 .035640014000065 .03561 .03842 .03842 .03240 .11696 .12476 .03370002070013503642 .03544 .1246 3.03570002070013503642 .03264 3.03257 .30624 .103620020103715 .10364200201007150020700207002090020700209003090		.515	3.0554		.112629	.13164	.03918	- 68000	- (20)	06130		1498	12393
3.006 3.0309 .03465 .12774 .03564 -100166 .03409 .03542 .03544 .03564 -100166 .03570 .03542 .03542 .03542 .03570 .03570 .03570 .00135 .03544 .03544 .03579 .03579 .03579 .03575 .		1.542	3.0909	-	.00473	.13019	.03864	00140	- (1977)	320401	-:06114	14986	-,12390
\$-664 \$-05240 .11696 .124/8 .033/0002(x)00342 .10344 .12145 .033/9002(x)00343 .10344 .12145 .033/9002(x)002(x)00342 .10344 .12145 .033/900286002(x)002(x)03232 .10364 .103620024900249002(x)002(9	3.606	3.0530	P	.05485	.12/74	.03564	- D016.8	9000	19760.	02114	14986	12711
11.848 3.03267 18314 12145 103379 100000 1.03415 10344 11.848 3.03257 30624 11360 103083 1.00129 1.00101 1.03715 16.010 3.0963 46538 110862 10288 1.0015 1.00209 1.00272 20.140 3.0963 100672 100299 10217 1.0016 1.00169 1.02293 24.286 3.03953 1.4461 1.09489 1.0237 1.001622 1.001639 1.01725 26.459 3.09412 99422 1.0696 1.01931 1.001639 1.001940	9	 	3.0524	9	.11696	.12478	04440	30000	10000	-,(13842	-,01801	1498/	13033
11.846 3.03257 3.0624 11340 03083003890032703232 14.010 3.03663 .46536 110962 .03863003990022703232 20.140 3.03603 .46536 10289 .02412003160030902672 24.266 3.03953 .4641 .09489 .0237004620046500465004650046500465004650046500465004650046500465004650046500466004650046500466004640		06/1/	3.0526		18314	10.01	0.000	- CARCIE	-,100135	03644	-,01160	15308	13032
16.010 3.09663 .46536 .10962003590022703232 ED.140 3.0960360372 .10299 .02412003160030902672 E4.266 3.03953 ./6461 .09489 .02373006220065301794 E6.459 3.09412 .94220879603370063900493017940	960	11.846	3.0525		*C90*	641711	6,000	(87288	00101	03715	014/5	-,1530,	13031
\$6.450 \$.06057 \$.06972 \$.10299 \$.02412 \$00516 \$012672 \$02672 \$026057 \$026057 \$02693 \$02752 \$006552 \$	9.0	16.010	3.034		2000	00011	canen.	00399	00227	03232	02441	153UR	-,12713
24.266 3.03953 4.4461 09489 02373 00462 00463 017.29 017.94 02343 00462 00463 017.94 02343 00463 017.94 02343 00463 017.94 02463 00463 017.94 02463 017.94 02463	0960	20.140	S. Caro	-	2003	20011	.UZBB6	00516	e04(H)	026/2	01476	15050	12391
20-459 3-10-10-201-645105-46901-62201-69301-79401-64101-79401-79	3	000		•	7/600	1000	.02412	(30,613	UN725	02293	-,01479	15950	- 1000
684015WT - COURT - COU		007	C660.6	•	./6461	.09489	.023/3	(X)622	00853	01794	03080	10000	30001
- Chrosen Control -	}	66.03	3.0841	•	.94222	.08796	.01931	00839	UK1832	0.01940	- 03084		70001
		GRADJENT	-,00090		020:14	60144	-,00093	-,00008	DOD1.a	19344	10000	. 1 . 300	13354

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SCALE = SCALE = SCALE = 1.900 1.900 1.900 1.900 1.900	136.1006 59.1N, 6.9025 INCHES 17.3528 INCHES -0186 SCALE ALPHA B -3.255	.1006 94.1N, XM .9029 INCHES 7H .3028 INCHES 2H .0186 SCALE .0186	XA RUN NO. 1788 - 1788	28/ 28/ CN 23561:	15.9636 INCHES .COCO INCHES .DOCO INCHES					.000	ELEVTR = BOFLAP =	-20,000
" " OO6.	20.028 . 0108 . 0108 . 3.29 . 1.416 . 5.76	SCALE CON	ZMRP RUN NC 852 871 823 823 823	28/ CN 23561:	DOOD INCHES					000.		-14.250
# AC+ 9000.9000.9000.9000.9000.9000	ALPHA ALPHA -3.25: -1.41: -1.6.7	SCALI	RUN NC 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	285					RUDDER =	000	RUDFLR =	40,000
006.006.006	ALPHA -3.25: -1.416		RUN NC 1552 1571 128 123	ટ રેંગે રે					ドル	5.290	61-LOC =	2,000
006	ALPHA -3.299 -1.416 -3.76		1 37.1 17.8 12.8 14.2	CN 23561 15674		1.49 GRA	GRADIENT INTERVAL =	100'5- = 7'00'	00.4 /00			
000000000000000000000000000000000000000	-3.255 -1.416 576		152 371 728 323	-,23581	5	£	ਦੁ	CYN	Շ	CPB1	CPB2	Ş
006	-1.414 		37.1 728 323 742	15674	.18768	.06928	.00044	00540	.09981	14618	27860	25476
006	7.6 779.		78 323 742		.18577	.05937	.00048	00530	58600.	13377	28044	25376
006	2/4.		123	10/41	.18457	.05453	.00033	UCA98	.03951	12304	28040	-,25105
			42	06180	.18293	.14826	,00037	-,00499	6/800.	-,11111	28096	25175
1.900	1.72			01658	.18106	.04297	.00025	00481	0.00890	-,10679	28135	24960
1.900	2.786		ć.	.02840	17855	.03785	.00035	-,00468	. 00,825	-,09403	28152	24717
1,900	4.848		92	.11647	.1/2/2	.02632	.00034	00457	.00773	-,07478	27327	24151
1.900	6.966	16900.	16	85102.	.16845	.01939	.000040	0.3444	.00802	05/75	2/81/	-,24363
1,900	9.046		ņ	.28822	.16382	.01175	-,00004	(N1462	. (P.)668	05161	27788	24326
1.900	13.237	29610	29	.45548	15398	.00500	00010	00468	.00562	00925	2832/	24()66
1.900	17.445	.01108	8	.63106	.14434	.00104	00025	-,110498	.00612	-,05463	28867	25670
1.900	20,521	.01081	81	. 1616	113517	00195	-,00034	00454	.00504	07662	28626	25967
	CRADIENT	00010	10	.04357	00182	00528	-, 00002	.00011	-,00026	ດອອດນ.	.00044	.00158
		_	RUN NO.	. 30/ 0	RN/L =	1.50 GRAC	GRADIENT INTERVAL =		-5.00. 5.00			
F C H	ALPHA	BETA		3	ð	£.	텀	N.	Շ	CPB1	CPB2	OF C
2.000	-4,376	.00619	•	19136	.14800	.06622	.00163	-,00505	.00100	67600.	15486	-,12563
2.860	-2.5%	06900*		14004	.14406	.06241	.00155	00494	.00931	00331	15802	-,12549
2,960	-1.529	47500.		10666	.141/4	.06114	.00155	00477	.00946	00308	15800	12221
2.960	497	.00445	•	-,07989	.13982	.05994	.00185	00472	.01046	-,00374	-,15806	11921
2.860	.514	.00720		05619	13827	.05784	.00138	00467	.00771	00398	16129	11929
2.960	1.361	.00529		-,02036	.13630	.05688	.00131	00446	67800	00083	-,16130	-,11611
2.860	3.652	.00443	2	.04159	.13169	.05414	.00100	00430	50600.	.01537	16449	10964
2.860	5.680	•6200•	£	.10113	.12745	.05032	•60000	00395	1.26LH).	.01550	-,16127	10960
2.960	1.140	.00437	2	.16236	.12419	.04831	.0000	-,00383	.00700.	.04108	15806	109601
2.050	11.865	.00263	2	.29000	.11758	.04731	.00047	-,00380	•6800.	.06012	15807	-,11284
0	16.010	.00299	D	.43491	.11199	.04855	.00016	00345	.00763	6,150.	16128	13203
2.860	20,157	.0003	ō	.58563	.10366	.04609	.0000	00249	.00732	01042	16130	13847
2.860	24,303	.00123	e.	. 14499	109601	.04518	-,00020	00192	.00512	06140	15808	14164
2.960	28.475	.00083	5	.91151	.08721	.04572	-,00039	-,00078	.00301	05497	14845	13523
-	GRADIENT	00019	ø.	.02888	00199	00147	-,0000-	.0001.0	00016	.00106	00114	. ເນຣເນ

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5	136.1866 50	S6. 1N.	S S	**	15,96	15,9638 INCHES				BETA =	3.000	ELEVTR =	-20,000
*	6.9025 INC		T T	H	0000	OU INCHES				ATURON :	900.	BOFLAP =	-14.250
"	17.5628 INCH	INCHES	2. 2. 3.	ti	0000	OU INCHES				RUDDER =	000.	RUDFLR =	40.000
ALE =	.0:00	SCALE								۳ لال	5.290	6T-LOC =	2.000
			RGN NO.		0 /62	RN/L =	3.50	GRADIENT INTERVAL =		-5.00/ 5.00			
MACH			BETA	ξ		5	5	룡	N.	Շ	CP81	CPB2	Ç
1.900	0 -3.255		8.040.9	-,23016	916	.18683	.06988	-,00165	.0000	05445	11126	27837	23448
26.2		••	3.03691	1518	181	.18483	68640.	00183	-,00022	05200	10856	28100	25445
1.90			9.03678	10460	3	.18355	.05558	00190	-,00046	05115	-,10856	28366	-,25445
1.90			3.03611	05968	93	.18185	.04827	00204	-,00054	-,05029	11388	28633	25446
1.90		m	.03812	-,01461	161	.18032	.04248	00227	-,90104	-,04871	11921	28899	25713
1,900		m	.03789	.03257	, <u>C</u>	.1 /825	.63/50	-,00202	-,00100	04856	-,11144	28906	25721
1.900		n	97750	.11889	681	1,62/1	.02781	00206	00174	04613	10627	28645	-,25198
1.900		'n	.03764	.20908	90	.16825	.01840	OUZU9	00)248	-,04369	1142/	-,28382	-,25466
3.90		3.0380-	7	.29305	Ş	.15363	.01265	00255	-,00304	04202	1222.0	28382	-,25466
1.900		3,04107	1107	45968	3	.15223	09900	00406	00403	-,04022	-,09828	21846	25195
1.900		3.05015	610	.63493	66	.14010	00010	00468	00918	03201	-,11156	-,27849	24933
1.900		3,05717	717	.76345	545	.13182	00186	00506	-,01265	02751	13005	27317	2466
	GRADIENT	.,0003	ĝ	.04317		00168	00526	-,0000	-,00022	66000.	.0000	00124	MAKKI.

		3	NO. 31/ 0	SAVL =	1.50 GRA	GRADIENT INTER	INTERVAL = -5.00/	00.4 /00			
M.O.	ALPHA	BETA	3	5	3	평	Č	Շ	CPB1	CPB2	S U
2.860	-4.376	3.02761	20162	.14692	.06013	-,00100	,00057	-,05471	01667	1516/	13524
2.860	-2.534	3.02112	14422	.14257	.05838	-,00091	,00067	04891	-,01663	15166	-,13523
P. 850	-1.551	3.01929	11076	.14048	66760.	-,00082	09000	-,04697	01651	15485	13520
2.060	511	3.02146	-,07989	.13884	44460.	-,0008	.00054	-,04877	01332	15485	-,13521
2.960	535	3.01978	0489	.13695	.05413	-,00136	11000.	-,04594	.00265	15807	13921
2.060	1.555	3.01803	02010	.13500	.05259	-,00074	-,00030	-,04311	.00588	15806	-,13520
2.000	3.611	3.01906	.03704	.13188	.05019	00140	-,00060	-,04297	.01215	-,15807	13523
2.060	\$. 6	3.61780	.10-01	.12769	.04953	00181	00113	04005	67500.	16120	13522
2.060	1.736	3.01531	.16276	.12419	.04646	00230	-, 00092	03800	00377	16128	13522
P. 860	11.6/1	3.01912	.29735	.11694	.04601	00379	00211	-,03687	00067	15808	-,12565
2.040	16.013	3,02364	.43117	.11027	.04593	000507	00511	03135	01338	1612A	-,12243
2.000	20.147	3.02608	. 56011	.10316	.04531	-, 00,609	00737	-,02569	.00260	16128	13202
2.960	24.301	3.02/89	87647.	.09457	.04229	ເນເຄຍເ	-,00831	-,02349	03899	1548/	-,13843
2.000	26.454	3.02/19	.90289	.08670	.04308	-,00779	00789	02205	(1486()	14846	-,13524
	GRADIENT	-,00093	16620.	00166	00131	00004	00017	.00140	.00429	-,00099	000000

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(RP6207) (15 AUC /3)

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LA-6C, UPATICAG, ORBITER U898 W/NOD, NOSE +CMS

REFERENCE DATA	⋖										
139.1808 59.1N. XMRP = 8.9029 1NCHES YMRP = 17.9628 1NCHES ZMRP = .0188 SCALE				15,9638 INCHES GOOD INCHES				BETA = AILRON = RUCDER = K/L	.000 .000 .000 .000	ELEVTR = BDFLAP = RUDFLR = GT-LOC =	-30.000 -14.25d 40.000 2.000
RUN NO.	RUN NO.		34, 0	RN/L =	1.49 GRA	GRADIENT INTERVAL = -5.00/	VAL = -5.0	90.4 /00			
BETA		7		ð	9	현	Š	Շ	CP81	CPB2	CPC
-3.291 .0026/278/D		Ñ	0,6	.20313	.09141	.00148	00391	.01006	11063	28265	23761
. 96600.	·	19	250	13978	.08102	.00143	-,00369	67800	09661	28/65	-,23983
.00156	•	148	8 2	.19838	37570.	.00158	-,00324	76800.	08337	-,2929	-,23983
_	·	8	13	.19582	.06901	.00125	00372	00600.	-,07594	29313	24007
		0550	6	.19326	.06236	.00133	-,00345	.00838	-,07356	-,29322	-,23756
	·	1600	_	.18999	.05615	.00162	00320	.00777	0/0/2	29315	23/46
.0281		0849	_	.18325	.04467	07100	00341	76700	08648	-,29047	-,23741
		1748		17562	.03454	.00133	00342	.00019	06272	2/98/	23478
		05652		11/045	. UZ8ZU.	50100.	-,00346	.09766	+ 0660	27960	23706
		.42813	_	.15862	96UZU*	, eaga.	-,00400	.00731	04341	27960	23441
_		59973		.14909	.01877	.00047	-,000445	67700	11758	-,28226	25296
		73013		.14257	.01850	,0000	00473	96,00.	14405	29022	26355
-,00001		.04472		-,00243	-,00576	.0000	. 00006	-,00025	.00361	00096	.00019
RUN NO. 32/ 0		32/	5	RN/L =	1.50 GRA	GRADIENT INTERVAL =	VAL = -5.00/	00.4 /00			
BETA		7.		ð	S.	ĕ	CAN	Շ	CPB1	CPB2	CPC
-4.393 10100 22912	•	21622		.15868	.07662	.00246	-,00462	.01382	02118	-,15323	-,11750
-2.5518158		18158		.15429	.07228	.00225	50500	.01483		-,15324	-,11431
.0023514811	•	14811		.15210	.07181	. UUS224	00460	.01220	-,00841	-,15324	-,11431
522 .0016111472	•	11472		.14946	.07045	.00185	00445	.01233	.00433	-,15645	-,11113
499 08604		08604		.14724	.116886	.00208	00466	.01239	.01388	-,15645	-,10795
1,536 .0024205525		05525		.14440	.06577	20200	00420	.01067	.02986	15645	10475
		01390		13974	.06277	.00163	-,00439	.01180	.04585	-,16287	10155
5.669 .00074 .07826		0/826		.13512	05090	.00135	00423	.01203	,06027	15966	-,10473
		14446		.13132	.05866	.00165	, 0039 v	.01136	.04268	16281	10/93
		27668		.12348	.05803	. נוטנוטנו	00411	.01176	96010.	15967	11757
16,00800164		41891		.11700	.05821	.00081	00345	.01141	04379	16288	12/18
		5631	۰	.10891	.05856	.00091	00242	.01113	-,05659	-,16289	13678
-,00770 .72176		1217	9	.10034	.05933	.00115	-, 00089	11600.	06622	15969	-,13679
28.46600331 .88821	•	8882	.	.09276	.06158	.00026	00086	.00589	-,07256	15008	13359
.00012 .03035	•	0303	•	-,00236	00168	-,00009	•00000	00038	.00899	00115	.00211

(15 AUG /3)

(RP6208)

LA-8C, UPWT1040, ORBITER 0898 W/MOD. NOSE +OMS

	REFERENCE DA	CE DATA								PARAMETRIC DATA	: DATA	
	136.1606 SQ.IN.		XMRP II		15.9636 INCHES				BETA =	3,000	ELEVTR =	-30.000
	8.9025 INCHES		AMED II	Ċ.	COUDO INCHES				AILRON =	000	BDFLAP =	-14.250
_	17.5628 INCHES		ZMRP =	o.	.0000 INCHES				RUDDER =	.000	RUDFLR =	40.000
	OTES SCALE	ALE							" "	5.290	6T-LOC =	2,000
		œ	RGN NO.	35/ 0	RNVL =	1.50 68	GRADIENT INTERVAL =		-5.00/ 5.00			
MACH	ALPHA	BETA	J	5	5	ā	형	ž	Ծ	CPB1	CPB2	Ų
1.900	-3.296	3,03623	·	2/49/	.20300	09260	20000	.00236	05867	04664	61612-	-,23733
1.900	-1.439	3.03407	•	19291	.19963	.00015	.00004	,00207	-,05466	-,02280	-,28775	23731
1.900	400	3.03221	·	14197	.19799	.07408	00005	.00199	05300	01218	28773	23729
1.900	. 63 9	3.03266		-,09517	.19532	.06693	-,00034	.00164	05293	00953	28508	23/29
006.1	1.685	3.03156		05213	.19290	06090	-,00053	.00133	-,05059	01483	-,28173	-,23729
1.900	N. 74	3.03136	•	00502	19037	.05610	-,00049	.00136	05046	02809	28775	23/31
1.900	4.84/	3,03250		.08693	.18313	.04332	-,00066	.00026	04810	37573	28245	23733
1.900	6.961	3,03502		17905	17642	.03405	00145	00163	04432	-,09692	27981	23999
1.900	9.046	3.03552	-	26060	16997	.02737	00100	-,00251	04189	08661	-,27195	23748
1.900	13.241	3,03/16		43119	.15868	.02309	00255	00311	-,04071	-,03655	-,26670	-,23/54
1.900	17.448	3,04653		.e0227	.14566	.01814	00387	00600"-	03033	13436	27204	24816
1.900	20.913	3.05371		13262	.13907	.61.10.	-,00456	01298	02438	17920	27466	25606
	GRADIENT	0006		.04443	-,00240	-,00599	-,00010	00024	.00123	00317	-,00022	-, 00000
		Œ	RUN NO.	33/ 0	RIVL	1.56 68	GRADIENT INTERVAL =	WAL = -5.00/	00.4 /00			
	ALPHA	BETA		3	ర	å	ĕ	Z.	Շ	CPB1	CPB2	CPC
P. 040	-4.39	3.02385	•	.23312	.15688	.07511	-,00021	87100	-,05443	.05499	15329	11445
2.000	3	3.01956	•	.16412	.15336	.07365	00000	67100	05056	.05541	15325	11435
96.	-1.366	3.01669	•	13612	.1508/	.07093	.00035	.00175	04775	.07495	-,15322	-,11426
2.940		3.01770	•	11199	.14859	,0 68 97	.00023	.00171	04863	.08457	15643	-,11425
6	.512	3.01596	•	07131	.14609	.06754	10000	.00127	04575	.09410	15643	11107
	1.550	3.01532	١	04901	.14384	.06660	.00003	.00113	04476	.11976	15322	10785
2.940	3.620	3.01642		.01954	.13938	.06319	.000331	90000	04284	.12600	15644	10/89
9.96.	 	3.01628		.06621	.13518	.00077	00050	-,00018	04174	.03956	15645	-,12071
7.9ed	(*,745	3.01991		.14985	.13184	6/650*	-,00123	02000:-	04062	.00434	-,15966	-,12/12
2.860	11.675	3.01695		.21.162	.12383	8/960.	00196	- 00119	03854	00519	15965	-,12710
2.940 2.940	16.005	3,01888		.42107	.11565	.05731	-,00314	-,00442	03026	-,04332	-,15963	13342
2.80 0.80	8.1 %	3.02262		.57346	.10789	.05833	00434	-, OU699	07.553	05293	16284	-,13984
2.000	24.310	3.02527		72535	0660.	,n5934	00533	00812	02336	09147	15643	1398,
	20.474	3.02622		.8917fl	02280	470 9 0.	-,00646	00761	02374	-,05951	15322	13668
•	2017	-										

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			LA-8C, 1	LA-8C, UPWT1040, ORBITER 089B W/MOD. NOSE +OMS		(RP62	(RP6209) (15 AUG 73	(8. 90	
REFERENCE DATA					_	PARAMETRIC DATA	: DATA		
136.1808 58.1N. 8.9029 INCHES 17.3628 INCHES .0188 SCALE	XHRP THRP ZHRP	11 11 II	15,9636 INCHES ,0000 INCHES ,0000 INCHES		BETA = AILRON = RUDDER = K/L =	.000 .000 10,000	ELEVTR = BDFLAP = RUDFLR = GT-LOC =	-30.000 -14.230 40.000 2.000	

SACF : LREF : BACF : SCALE ::

		RUN NO.	NO. 36/ 0	RN/L =	1.50 GRA	GRADIENT INTER	INTERVAL = -5.00/	00'\$ /			
Ş	ALPHA	BETA	3	ð	£	é	NA.	Շ	CPB1	CPB2	cPc
1.900	-3.304	.01241	31012	.20690	,2660.	.00583	-,01143	.02497	06366	26047	23281
1.900	-1.455	.01198	22254	.20397	.08673	.00555	01132	.02446	06341	28304	23533
1,900	431	.01115	17359	.20205	.08120	.00542	01125	.02461	060	28569	-,23798
1.900	629	.01380	12684	.19983	.07477	.00490	-,01129	.02241	-,05813	-,28834	24062
1.900	1.689	.01186	07988	.19713	61690.	CRIMES	-,01117	.02333	-,05813	-,28834	24062
1.900	2.147	.01208	03102	.19454	.06240	.00486	01086	.02197	-,06341	-,28834	24062
1.900	4,620	01110	00000	.18835	.04967	.00462	-,01087	. 1)2222	-,08451	-,28568	-,24060
1.900	6.914	.01235	.19055	.18150	.03882	.00384	01060	.02018	09243	28036	23796
1,900	9,023	.01320	.23813	11/530	.03060	.00315	-,01099	. 112135	-,09240	28036	23794
1.900	13,219	.01410	.41029	.16431	.02231	.00227	-,01131	.02006	-,02897	27240	-,23793
1.900	17.411	.01555	.57748	.15436	.01978	,00149	-,011/6	.01976	08/95	27504	24584
1.900	20.491	.01535	,70921	.14787	.01897	.00081	-,01163	.01943	12410	28301	-, 25644
	GRADIENT	-,00010	.04355	-,00228	00602	00016	.00008	-,00040	.00191	000.ª	-,00102

		RUN ND.	0 /8£ .0	RN/L =	1.50 GRA	GRADIENT INTER	INTER:AL = -5.00/	00.6 /0			
7	416	PE 74	7	đ	¥	ĕ	N.	Շ	CPB1	CPB2	ς _ο ς
3	2.7	74010	- 220.4	16174	08089	.00564	-,00984	.02052	7,000	-,16016	-,13399
2.960	-2.552	22010	16613	15680	.0,617	67500.	-,00965	.01985	00529	15692	-,13391
2.000	-1,539	86010.	13746	.15438	.07634	.00515	-,00927	.01811	-,00228	16015	13395
2.860	-, 517	00000	10647	.15203	.07486	10600	-,00931	,01917	00211	15692	-,13391
2.860	. 532	.00916	07070	.14928	.07218	.00491	00940	.01927	.00111	16013	13391
2.860	1,573	A0900.	-,03956	.14663	.07161	.00450	-, 00947	.01936	.01065	16014	13393
2.000	3,607	66600.	.01765	.14185	.06752	.00418	00945	.01859	. U2971	16336	-,13076
2.000	9.669	,0600.	.08447	.13762	.06513	.00369	-,00956	.01879	66790*	-,16658	-,12/58
2.860	***	.00815	.14567	.13386	.06227	.00304	00911	.01812	.06165	-,16337	-,12757
2.860	11,685	.00919	.28063	.12605	.06189	.00235	00913	.01670	,01997	1633/	-,13399
2.860	16,008	•0900•	42087	.11888	.06014	.00149	00806	.01640	02472	16658	14037
2.860	20,159	.00568	.56780	.11012	.06066	.0006	-, GO679	.01332	03754	16658	146/8
2.660	24,306	.00347	.72719	.10138	405974	.00046	-,00537	.01126	04392	-,16336	14357
2.000	28.467	.00356	.89124	.09397	.06262	-,00004	00417	.00823	07917	153/3	14358
	GRADIENT	-,00021	.03016	00248	00168	00020	, UCOD4	-,00017	.00363	-,00047	.00031

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LA-BC, UPWIIDAN, ORBITER 0898 W/HOD, NOSE +OHS

				7	ec, uPurtos	LA-8C, UPUT1047, ORBITER 0898 W/MOD, NOSE +OMS	0898 W/HOD.	NOSE +OHS		(RP6210)	(0) (15 AUG /3	(6, 90)
	REFERENCE DA	MCE DATA								PARAMETRIC DATA	: DATA	
\$60 = 1	136.1608 30.1N.		XORRP ::		15.9638 INCHES					3.000		-30,000
	17.5628 INCHES				.0000 INCHES				RUDOER =	10.000	BOFLAF =	40.000
SCALE =	.0166 SCALE									5,290		2.000
		Ř.	RGN NO.	377.0	U RN/L =	1.50 GRA	GRADIENT INTERVAL = -5.00/ 5.00	TVAL = -5.1	00.6 /00			
5	ALPHA	BETA	-	3	5	Ş	륟	N.	Շ	CPB1	CPB2	S S
1.900	-3.276	3.04695	•	.28931	.20416	.09643	76600	-,00459	-,04513	03115	-,27224	23773
1.900	-1.442	3.04392		-,20697	.20111	.08603	.00363	-,00495	04186	.01100	28025	23779
1.900	406	3.04152		15789	.19535	47670.	.00361	00521	03943	.02400	28032	24052
1.900	664.	3.0419,	•	1109	.19699	.07324	.00325	00542	-,03932	.02897	28305	24328
1.900	1,705	3.04016		06413	.19473	.06689	.00269	00555	-,03766	.01823	-,28310	24334
1.900	7 	3,04235		01534	.19223	2,040.	.00231	-,00592	03836	.01542	28314	-,24340
1.900	4.846	3.04160		.07237	.18611	.04830	£100.	00636	-,03666	.00206	28054	23819
1.900	.93	3.04456		.16039	.18014	.04012	.00064	-,00794	-,03437	04804	<8319	24083
1.900	9:036	3.04567		.24795	.17368	.03261	.0000	- 009th2	-,03201	06647	-,28053	24081
1,900	13.226	3,04631		.41428	.16186	.02662	00131	/66DG*-	-,02938	-,00037	-,26459	23811
1.900	17.432	3,05535		.58548	.15056	. 02308	.e300	01482	02193	-,07685	26/23	24073
1.900	20.496	3.063/2		71204	.14472	.02256	-,00417	01881	01679	15856	-,26982	24859
	GRADIENT	-,00059	•	04472	-,00220	-,00595	00029	-,00023	.00098	. (1)(1299	- ,00095	-, 090036
		æ	RGN ND.	39/ 0	RN/L =	1.50 GRA	1.50 GRADIENT INTERVAL = -5.00/ 5.00	VAL = -5.0	00.6 /00			
₽ P	ALPHA	BETA	U	3	ð	3	e	Š	Շ	CPB1	CPB2	S D
2.000	-4.399	3,03079	•	-,23039	.15930	.69.0	.00324	00415	-,04337	.06487	-,16015	13397
2.000	-2.557	3.02806	•	-,16580	.15428	.07283	.00333	-,00346	04302	105501	-,16917	-,13400
2.000	-1,539	3.02512	•	.13220	19161.	.07146	.00310	00358	04007	.05801	16018	-,13405
2.860	49	3.02053	•	-,10127	.14948	.06910	.00295	00381	-,03534	.05494	160118	13403
2.940	.524	3,02443	•	07263	.14697	,06837	.00305	00416	03812	.07416	16338	13402
2.860	1.590	3.02100		04409	.14448	.06590	57500	00442	-,03433	£1060.	16338	13402
2.040	3.633	3,02092	•	.02282	.14005	.06440	40800·	-,00515	03237	.13184	16338	13400
2.860	5.004	3,02303	~•	.07728	13591	.06008	.00123	00523	03411	.10299	-,16655	13/21
2.840	1.142	3.02169	•	14574	.13249	.05953	.00061	-,00549	03203	.03244	16660	14044
2.000	11.866	3,02137	•	27805	12444	.05891	.,000	00631	02895	01863	16660	14005
2.860	16.01/	3,02432	•	42075	.11663	.05822	00274	00884	02336	-,03454	16659	14682
2.000	20.152	3.02564	٠	.56805	.10946	.05966	-,00,407	01070	01853	02814	16659	-,14681
2.660	24.302	3.03002	•	20527	.10155	, Cheriz,	00527	01212	01735	08888	16018	14682
2.660	26,470	3,03020	٠,	.89117	.09366	.06166	00541	01078	01948	05056	15691	-,14363
	GRADIENT	00127	7.	03100	(X)239	-,00154	00014	-,00016	.00150	.00847	-,00053	-, 00000

LA-8C, UPWT1040,

(RP6211) (15 AUG /3)	BADANETRIC DATA
S +OMS	
, ORBITER 0898 W/MOD, NOSE +OMS	
. ORBITER DA	

14. 14.		REFERE	REFERENCE DATA								PARAMETRIC DATA	DATA	
1,1,926 HCMES 746		2 9000		11	WI 8638	ES				BETA =	.000	ELEVTR =	-10,000
E		40.40		**	O000 INC	ÆS				AILRON =	10.000	BOFLAP =	-14,250
F		17.3626 1	ACHES		ONI DOCO.	HES				RUDDER =	000.		40.00
### BETA ON CA CUM CB CONSTITUTES 1.49 GRADIENT INTERVAL = -5.000/ #### BETA ON CA CUM CB	i.J	.0166 5	CALE							Ϋ́	5.290	c1-LOC =	2.000
-3,249004/719346			•					DIENT INTER		00. \$.00			
-3,2490002210927 .17931 .04463 .01166 .00064 -1,3540002210927 .17601 .03456 .0116600019 -1,3540002200583 .17695 .03013 .0117400013 1,74400022 .00169 .17234 .01923 .0112300119 5,035 .00037 .22453 .17456 .01923 .0112800186 13,239 .00037 .22453 .14564 .00311 .0111600269 13,239 .00037 .22453 .1661301151 .0111600269 13,239 .00037 .24453 .15572 .01151 .0111600269 13,239 .0042 .2453 .15572 .10134 .0106900299 17,442 .00034 .2453 .13572 .10134 .0106900299 17,442 .00034 .04340 .04340 .0106900299 17,442 .00034 .11372 .1354300344 .0096600299 17,442 .0001317329 .13543 .00769 .0096600299 17,442 .0001317329 .14318 .04957 .0076200242 -4,361 .0001317329 .14318 .04957 .0076900229 1,354 .0001411372 .14009 .04340 .0001900239 1,354 .0001411372 .14009 .04340 .0001900287 1,354 .0001411372 .14009 .04379 .0071900239 1,354 .00013 .11769 .13564 .04379 .0071900239 1,354 .00013 .11769 .13359 .04276 .0006900339 1,354 .00013 .11769 .13359 .04276 .0006900339 1,354 .00013 .11769 .13359 .04370 .0006900339 1,354 .00013 .13661 .11373 .03364 .0006900386 1,1,6,000009 .13661 .11373 .03364 .0064900396 1,1,6,0000019 .14681 .11373 .03364 .0064900396 1,1,6,0000019 .14681 .11373 .03267 .0006900049 1,1,6,0000019 .14681 .11373 .03267 .0006900049 1,1,6,0000019 .14681 .11373 .03267 .0006900049 1,1,6,0000019 .14681 .00019 .0006900099	į	7	47.36		3		, a	형	ž	5	CPB1	CP82	CPC
	006-1	-3.249	.004	•		131	.04465	.01186	\$9000	.00461	14785	27832	-,25173
3560002200439 .17696 .03015 .01174000343 45900076501650 .17633 .02567 .0115300110 2.77400136 .102906 .17436 .01923 .01129001131 2.77400136 .13637 .16634 .00131 .0111600269 4.67400116 .13642 .16634 .01311 .0111600269 9.052 .00166 .322934 .1663300149 .0106900129 17.442 .00134 .66634 .16633 .0104600129 20.320 .00134 .66634 .1446702263 .0094600129 20.320 .00134 .66939 .1364300240 .0094600129 4.574 .00013 .13639 .10246 .0094000044 -4.361 .00013 -1.7329 .14318 .04957 .0076200041 4.574 .00013 -1.7329 .14318 .04957 .0076200239 -4.361 .0003400347 .13864 .00799 .0071500283 -1.554 .00013 -1.7329 .14318 .04957 .0076200239 -1.554 .0002400347 .13859 .04236 .0071000311 -2.56 .00004 .13854 .13854 .00719 .0076900389 1.3640011300147 .13859 .04236 .0071000311 -2.56 .00004 .11864 .12444 .00693 .0069300380 11.67500001 .11825 .10369 .0059300380 11.67500001 .11825 .10369 .0059300380 11.67500001 .11825 .10369 .0069300380 11.67500001 .11825 .10369 .0069300380 11.67500001 .11825 .10369 .0069300380 11.67500001 .11825 .10369 .0069300380 11.67500001 .11825 .10369 .0069300380 22.3430 .00014 .77702 .09809 .02218 .0069300193 22.4301 .00049 .77702 .09809 .02218 .0069300193 22.4301 .00049 .77702 .09809 .02218 .0069300193	1.900	-1.409	0032	•	·	101	.03456	.01166	-,00019	.00476	-,12854	-,28068	-,25134
1,746 000302 01650 17636 01354 00110 00302 00186 17456 01923 01123 00113 00114 00214 0	1.900	336	-,002	•	·	8	.03015	.01174	-,00043	.00409	-,12542	-,28316	24843
1.74600302 .02906 .17456 .01923 .0112900131 2.7400146 .07189 .17234 .01429 .0112800108 4.9.400112 .13872 .14693 .01031 .0111600269 9.092 .00037 .2445 .1653301131 .0101600269 17.442 .00314 .66634 .143701394 .0039600395 17.442 .00314 .66634 .1446702263 .0039600395 17.442 .00314 .66634 .1446702263 .0039600395 17.442 .00314 .0434000148003960039600395 17.442 .00314 .14372 .13643024960039700441 ALPIA RETA ON CA CA CAM CAM CAL CAL -4.381 .0001311372 .14019 .04957 .0076200041 -2.342 .0007709480 .13864 .04799 .0073500285 -1.3520007709480 .13864 .04799 .0073500287 -1.3520007709480 .13864 .04710 .0071500331 1.3640009200347 .13895 .04236 .0064900339 2.46900093 .11882 .12721 .03649 .0069300339 11.67500093 .11882 .12721 .03649 .0069300339 11.67500003 .31661 .11825 .03379 .0064300336 11.67500004 .77702 .09609 .0053600346 24.303 .00045 .77702 .09609 .02261 .0064300369 24.303 .00045 .77702 .09609 .02261 .0064300369 26.474 .00067 .4762 .09609 .02261 .0064300643 26.474 .00067 .4762 .09609 .02261 .0064300643 26.474 .00067 .4762 .09609 .02261 .0064300643 26.474 .00067 .4762 .09609 .02626 .00043 26.474 .00067 .4762 .09609 .02626 .00043 26.474 .00067 .4702 .09609 .02261 .0064300643	1,900	664	-,000	·		733	.02367	.01153	00110	.00413	-,122/2	28851	-,24574
2.7.74 C0146 O7189 17234 01429 C0148 C0148 C0148 C0148 C0148 C0128	1.900	1.746	×00.			96	.01923	.01129	-,00151	.00655	-,12032	29396	24589
4.8/400112 .158/2 .16694 .00311 .0111600269 9.022 .00186 .32934 .1633400429 .10106900390 13.239 .004/2 .66954 .16413 .011160028600390 17.442 .005/34 .66954 .1448/02263 .0094600390 17.442 .005/34 .60080 .13643012/66 .0099000990 GRADIENT .00040 .04340001480269/0029000041 ALPHA BETA CN CA CA CA CB CRADIENT INTERVAL = -5.00/ -4.381 .0001317329 .14009 .04799 .0078200262 -2.362 .00044113/2 .14009 .04799 .0078200263 -1.3520007/09460 .13864 .04790 .0071000320 1.3640001300347 .13894 .04526 .0071000320 1.3640001300347 .13894 .04526 .0064900320 1.3640001300147 .13993 .04226 .0064900320 1.36400013 .18164 .12821 .00849 .0059300330 1.16/200013 .18164 .12821 .00849 .0064900330 1.16/200013 .18164 .13872 .00346 .0064900330 1.16/300013 .18164 .13872 .00364 .0064900330 1.16/300013 .18164 .13872 .00364 .0064900330 1.16/300013 .18164 .13872 .00364 .0064900330 1.16/300013 .18164 .13872 .00364 .00649 .00043 24.303 .00045 .1760 .00629 .00336 .00635 .000336 24.303 .00045 .1760 .00629 .00354 .00049 24.304 .00047 .13826 .10354 .00649 .00649 24.305 .00044 .1760 .00629 .00354 .00049 24.307 .00049 .1760 .00629 .00629 .00036	1.900	2.114	001			34	.01429	.01128	00188	67600	12300	29496	24471
ALPHA BETA CA CA <t< th=""><th>1.900</th><th>4.9/4</th><th>-,001</th><th></th><th></th><th>160</th><th>.00311</th><th>.01116</th><th>00269</th><th>,00666</th><th>14075</th><th>-,28255</th><th>23796</th></t<>	1.900	4.9/4	-,001			160	.00311	.01116	00269	,00666	14075	-,28255	23796
9.052 .00186 .32934 .16013 01151 .01016 00429 13.239 .004/2 .49552 .1531 011904 .00366 00429 17.442 .0054 .26854 .1448/ 02263 .00946 00724 20.550 .0054 .04340 00148 02766 .00950 00040 ALPHA BETA CN CA CLM CBL CVN -4.361 .00043 17329 .14318 .14957 .00042 00041 -2.362 .00044 17329 .14318 .14957 .00782 00041 -2.362 .00044 17329 .14009 .04799 .00782 00042 -2.362 .00044 17329 .14009 .04799 .00710 0028 -2.362 .00004 17329 .14009 .04799 .00710 0028 -2.362 .00004 0044 .13864 .04491 .00710 00324	1.900	6.979	.000			7	00445	.01069	06350	.00682	-,13780	-,27977	24039
13,239 .004,2 .495,2 .1331,01904 .0096600595 17,442 .00514 .66654 .1348702263 .00946007,24 20,220 .00,34 .60065 .1364302766 .00946007,24 20,220 .00,34 .60065 .1364302766 .0094000041 4,241 .00040 .04340 .1014600767007,300041 -4,361 .00013 -17329 .14318 .04957 .0078200042 -1,552 .0004411372 .14009 .04799 .0073500262 -1,552 .0004411372 .14009 .04799 .0073500262 -1,552 .0004411372 .14009 .04799 .0073500262 -1,554 .0003406597 .13564 .0436 .0071000311 -2,54 .00034 .00537 .13569 .04360 .0071000331 -2,54 .00034 .00337 .13572 .04364 .0064900339 -1,054 .00043 .05337 .13572 .04364 .0064900339 -1,054 .00004 .11783 .13572 .03364 .0064900336 -1,054 .00004 .11783 .13572 .03364 .00649 .00636 -1,0004 .00049 .11783 .13572 .03364 .00649 .00636 24,303 .00044 .77702 .09809 .02218 .0064900336 -1,0004 .00004 .77702 .09809 .02218 .0064900013 -0,0004 .00067 .00625 .00636 .00649 .00649 .00649 -0,0004 .00067 .00626 .00649	1.900	9.052	.001			113	01151	.01016	00429	66900	-,12332	-,27919	24224
17.442 .00014 .06094 .1448702263 .0094600724 20.520 .00734 .80085 .1364302766 .0099000009 GRADIENT .00040 .043400014802766 .0099000041 ALPHA EETA CN CA CLH CBL CTN -4.361 .00013 -17329 .14318 .04997 .0078200242 -2.362 .0004411372 .14009 .04799 .0073500262 -1.3520007709460 .13864 .04710 .0071000311 -3.54 .0003408597 .13592 .04336 .0071000331 -3.611 .00034 .09337 .13592 .0436600339 -1.3640011300147 .13393 .04276 .0066900339 -1.36600092 .11783 .13572 .04101 .0060900339 -1.3640011300147 .13393 .04276 .0064900339 -1.3640011300147 .13393 .04276 .0064900339 -1.3640011300147 .13393 .04276 .0064900339 -1.3640013 .11783 .13672 .04101 .0064900339 -1.000400013 .11783 .13672 .0336400386000400013 .11864 .11873 .03207 .0059300380000400017 .60625 .10563 .0262600336 24.303 .00045 .77702 .09609 .02218 .0064900013000013 .0262600154 .0261600013	1.900	13,239	.004			111	-,01904	.00986	00595	.00734	08245	28136	-,24690
20.520 .00/34 .80085 .13643 02/66 .00990 00040 GRADIENT .00040 .04340 00148 00507 00041 00041 ALPHA BETA ON CA CLH GBL CYN -4.361 .00013 11372 .14318 .04957 .00782 00042 -2.362 .00004 11372 .14009 .04710 .00715 00023 356 .00004 11372 .14318 .04957 .00745 00024 366 .00004 11372 .14009 .04710 .00745 0025 366 .00007 1356 .14318 .04597 .00745 0025 366 .00007 .1356 .04356 .00745 0023 0023 .366 .00004 .11785 .1356 .04456 .00649 00330 .366 .00043 .11785 .14310 .00649 00330 .36	1.900	17.442	1600		·	18.	02263	,00946	-,00724	.00856	-,11623	28909	-,25983
ALPHA BETA CA CLM GRADIENT INTERVAL = -5.00V ALPHA BETA CN CA CLM GRADIENT INTERVAL = -5.00V -4.361 .00013 17329 .14318 .04957 .00082 00024 -2.362 .00044 11372 .14039 .00735 00024 354 .00034 08940 .13864 .04710 .00715 00262 354 .00034 08940 .13864 .04710 .00715 00262 356 .00034 08957 .13596 .00710 00282 00331 366 00013 00147 .13599 .04521 .00649 00332 1.366 00013 11785 .13592 .04101 .00649 00332 3.611 00043 11785 13564 0456 00339 00339 1.364 00045 11785 11825 04156 00346 00339 1.6.006	1.900	20.920	.00,			E M	02766	06600	-, OCIBO9	.00735	-,11620	27842	25185
RLN NO, 197 D KN/L = 1.50 GRADIENT INTERVAL = -5.00/ ALPHA BETA ON CA CLH GBL CYN -4.361 .00013 -1.17329 .14318 .104957 .0078200223 -1.552 .0004411372 .14009 .04799 .0073500223 -1.552 .0002709404 .13864 .04799 .0071000262 -5.514 .0002809697 .13896 .04521 .0076900287 1.5640001300147 .13393 .04276 .0066900287 3.611 .00043 .05337 .13072 .04101 .0066900287 5.68900099 .11785 .12721 .03846 .0066900339 5.68900099 .11785 .12721 .03846 .0069800389 11.67300013 .18164 .12244 .03699 .00593003880 11.67000009 .11785 .11373 .03279 .0053800487 26.474 .00001 .44561 .11373 .03277 .0055800487 26.474 .00004 .77702 .09609 .02518 .0064900487 26.474 .00004 .77702 .09609 .02518 .0064900043		CRADIENT	7000		'	48	-,00007	€./200*-	-,00041	06000.	, ecoo.	00130	.00166
ALPHA BETA CN CALPHA CRADIENT INTERVAL = -5.00V ALPHA BETA CN CA CLH CBL CYN -4.361 .00013 -17329 .14318 .14957 .00782 00722 -2.362 .00044 11372 .14009 .04799 .00735 00262 314 .00024 13372 .13864 .04710 .00710 00262 .326 .00024 09640 .13864 .04710 .00710 00262 .326 .00024 09440 .13864 .04710 .00710 00320 .326 .00013 00147 .13393 .04276 .00769 00320 .3261 .00024 .11785 .13572 .04101 .00699 00339 .436 .00024 .11824 .13869 .00426 00339 .436 .00024 .11825 .03276 .00699 00339 .436 .00024 .11825 <						<u>!</u>							
ALPHA BETA CN CA CLM GBL CYN -4.361 .00013 17329 .14316 .04957 .00782 00742 -2.362 .00044 11372 .14039 .04799 .00735 00242 354 .00044 11372 .13694 .04710 .00715 00252 364 .00034 06597 .13595 .04710 .00710 00252 364 00034 06597 .13595 .04521 .00710 00331 1.364 00013 00147 .13599 .04521 .00749 00331 1.364 0013 00147 .13593 .04276 .00649 00332 3.611 .00043 11785 .12721 .03846 .00649 00339 11.849 .00049 00049 10039 00346 00339 11.849 .00459 00339 00346 00336 00339 11.849			UZ.		0	n		DIENT INTER	VAL = -5.0	00.4 %			
-4.361 .00013 -117329 .14318 .144957 .00782002420024211372 .14009 .04799 .00735002530025311372 .14009 .04799 .00735002530025411372 .13864 .04710 .00715002620002400597 .13864 .04710 .0071000311002620009200307 .13999 .04276 .007100031100262 1.3864 .04710 .007100031100320 1.38640011300147 .13993 .04276 .006490032000330 1.3864001130004900330003390033900339 1.3879 .0064900330 1.3864001300330 1.386400337 .0064900330 1.386400337 .0064900330 1.386400337 .0064900330 1.386400337 .0064900330 1.3864003	3	7	47.74	č	5		ð	큠	Š	Շ	CP81	CPB2	CPC
-2.562 .0004411372 .14009 .00479 .0073500253 -1.5520007709460 .13864 .04710 .00715002620007709460 .13864 .04710 .00715002620003406597 .13595 .04536 .0071000311 .00262 1.3560011300147 .13959 .04576 .0056900320 1.35640011300147 .13959 .04276 .00569003200032000339 .11763 .13072 .104101 .00569003390033900394003970033900390	9	198.4	1000	•		18	.04957	.00782	00242	62600.	.00865	-,15210	11649
-1.352000//09460 1.3864 .04/10 .00/1500262014.5002406597 1.359604360071000310026204360436007100031003200346043600710003100320034600130032000330034600049003200033003460004900330003300034600049003300033000346000490033000330003300033000330003300033000330003300033000330003300033000346004700470004900470047004700470044	8.660	2,362	000	•		8	.04799	.00735	00253	.00880	01357	-,15207	11643
514 .0003406597 .13599 .04536 .0071000311 .5260009203007 .13599 .04521 .0064900320 1,3640011300147 .13393 .04276 .0064900320 5,6460011300147 .13593 .04276 .0064900320 5,64600013 .11783 .13072 .03846 .0060900339 11,67300013 .11783 .12464 .03649 .0059300380 11,67000013 .31661 .11825 .03379 .0059300380 20,143 .00017 .60625 .10563 .02798 .0062500346 24,303 .00045 .77702 .09609 .02578 .0064900459 26,474 .00004 .26601 .09168 .00625003567 26,474 .00004 .26601 .09168 .0062100619	2.860	-1.552	2000	•		3	.04710	.00715	00262	09600	02000	-,15529	-,11964
.526 -,00092 -,00147 .13594 .04521 .00649 -,00320 1,564 -,00113 -,00147 .13933 .04276 .00669 -,00320 3,611 .00043 .0337 .13072 .04101 .00669 -,00339 5,668 -,00039 .11785 .12721 .03846 .00605 -,00339 7,733 -,00013 .18164 .13549 .00593 -,00339 11,6,06 -,00049 .11825 .03379 .00593 -,00475 20,143 .00017 .66625 .10187 .00594 -,00487 24,303 .00045 .77702 .09609 .02578 .00625 -,00356 26,474 .00067 .77702 .09609 .02518 .00649 -,00619 26,474 .00067 -,00049 -,00049 -,00049 -,00049 -,00049	2.960	514	.000	•		56	.04536	.00710	-,00311	.00982	-,02318	-,15529	11963
1,5640011300147 .13393 .04276 .0066900297 .00297 .00339 .0461 .00043 .09337 .13072 .04101 .0066900297 .00339 .11765 .12721 .03846 .0060500339 .10354 .003605 .10039 .11767 .131641 .003649 .00393 .10039 .11767 .003649 .00390 .00390 .11767 .00346 .003900 .003900 .003900 .003900 .003900 .00390 .00390 .00390 .003	2.040	.526	-,000	•	.135	8	.04521	.00649	00320	.01087	-,02640	15529	-, 12284
3.611 .00043 .09337 .13072 .04101 .006090033900339	2.040	1.8	1.001	-	.133	93	.04276	69900*	-,00297	,0010.	-,02645	-,15529	-,12286
5.666 0009 .11765 .12721 .03846 .00605 00356 7.733 00013 .18164 .12464 .03699 .00380 00380 11.675 00015 .31661 .11825 .03379 .0056 00475 10.4006 00019 .45681 .11373 .03207 .00594 00487 20.143 .00017 .60825 .10563 .02796 .00625 00336 24,303 .00049 .7702 .09469 .02367 .00649 00367 26,474 .00067 00156 00156 00156 0013	2.960	3.611	700.		.130	21	.04101	.00609	-,00339	.00925	02342	15853	11332
11.67300013 .18164 .12464 .03569 .0039300380 .11.67300003 .31661 .11825 .03379 .0036600475 .11.670 .00019 .45681 .11373 .03207 .0059400487 .00487 .00149 .00017 .60825 .10563 .02798 .0062500356 .24.303 .00049 .77702 .09809 .02367 .0064900367 .00649	2.000	5.688	-,0009		.127	21	.03846	.00605	-,00356	.01039	-,00100	-,15531	11011
11.67500005 .31661 .11373 .03207 .0036600475 .00475 .0020600475 .0020600475 .0020600475 .0020600487 .0020600036 .00207 .00207 .0020500356 .00205 .00045 .00205 .00205 .002057 .002057 .002057 .002057 .002067	2.040	1.133	9001		.124	ş	.03669	.00593	00380	\$ 96 00.	01055	-,15531	11329
16,006 -,000,9 -,45681 .113,3 .03207 .00349 -,00487 20,143 .00017 .60825 .10563 .02798 .00625 -,00356 24,303 .00045 .77702 .09609 .02367 .00645 -,00367 26,303 .00067 .94801 .09168 .02218 .00699 -,00619 44ADIENT -,00003 .02218 .00013 -,00013	2.060	11.675	000		.118	52	.03379	.00386	00475	.01093	02653	-,15530	-,11969
24,303 .00017 .60825 .10563 .02798 .0062500356 .24,303 .000450056700567005670056700567005670056700567006190061900619006190061900619006190061900619006190061900619006190061300613	2.000	16.006	-,000.		.113	13	.0320,	.00594	00487	.01050	-,02973	-,15852	13249
24.303 .00045 .77702 .09809 .02367 .0064500567 .00649 .00619 .02644 .00067 .98801 .09168 .02218 .0069100619 .0040100013 .0040100013	098.3	20.145	.000		.105	63	96720.	.00625	-,00536	11600.	02911	-,15852	-,13251
20.4/4 .0006/ .94801 .09168 .02218 .0069100619 .0040100013 .0040100003 .00401400003	2.040	24.303	, pood		960.	60	.02367	.00645	-,00567	.00781	-,05854	-,15852	13570
0000- 12000,- 01100,- 44100,- 42820, 40000,-	2.860	20.474	9000		.09	93	.02218	,00691	-,00619	.00653	-,06179	14890	-,13252
		GRADIENT	-,000		001	*	-,60110		-,00013	•0000	00372	COO76	-,00007

(RP6212) (15 AUG /3)		/TR = -10.000	AP = -14,250	RUDFLR = 40,000	67-LOC = 2,000
(RP6212)	PARAMETRIC DATA	3.000 ELEN	10,000 BDFL	OOU RUDE	5.290 GT-L
	ď	BETA =	AILRON =	RUDDER =	٠ ۲
NOSE +OHS					
LA-8C, UPWT1040, ORBITER 0898 W/MOD, NOSE +OMS					
ORBITER D					
UPAT1040,		15.9638 INCHES	D INCHES		
LA-8C,		15.963	.0000	0000	
		" 9.	# Q.	" Q.	
	Y.	X	YMKP	ZMRP	
	REFERENCE DATA	SAEF = 136.1606 SQ.IN. XOMP	D25 INCHES	17.5628 INCHES	188 SCALE
	ox.	136.1	6,0	7	o.
		H	H	*	H LJ
		2	LAEF	BREF	SCALE

		3	NO. 25/ U	RN/L =	1.50 GRA	GRADIENT INTER	INTERVAL = -5.00/	(M) 5.0k)			
¥0	ALPHA		3	ð	1	ë	ZA.N	Շ	CP81	CP32	S
1.900	-3,250		19276	16111.	.04288	\$7600	.00521	05600	-,15668	28139	-,24429
3.900	-1.417	3.02505	11223	.17607	.03442	0000	.00381	05209	14614	28408	24168
1.900	352		06325	.17529	.02885	80600	.00336	05124	13290	28142	24168
1.900	\$		-,01826	.17409	.02226	.00899	.00265	-,04967	-,12496	28408	-,24168
1.900	1.733		.02493	17216	17710.	.00881	67100.	04012	11443	-,28144	241/1
1.900	2.777		.06820	.17118	.01388		.00136	04727	10388	27890	24173
1.900	4.859		.15433	.16/96	69200	.00845	.00006	-,04567	-,10923	-,2788	24441
1.900	8.978		.24454	.16489	00604	.00800	-,00165	-,04335	11987	28416	24973
1,900	9.039		,32843	.16095	01112	.00716	-,00296	-,04096	11479	28420	25508
1.900	13.253		.49494	.:5226	01789	.00540	-,00531	03697	09034	28153	25505
006.1	17.4%		.67040	.14147	02455	.00486	-,01202	-,02892	-,11993	27887	25505
1.900	20.527		.80105	.13276	02614	.00400	01644	-,02219	-,15690	26557	249/3
	GRAUIENT		.04281	00122	00496	00016	00063	.00125	.017681	09000	-, 00002

Š		BET.	3	ð	ğ	턴	N.C	Շ	CPB1	CPB2	OP O
2,000		3,01745	-,16623	.14264	.04901	.00461	.00347	-,05239	.00548	15209	12288
2.840		3.01798	12049	.13960	.04721	.00434	. UH278	-,05140	02333	1,22019	12289
2.040		3.01733	08942	.13788	.04566	COOC.	.00256	-,05037	02981	-,15211	-,12612
2.860		3.01677	060e3	.13623	.04563	.00412	00200	04851	03612	-,15209	-,12609
2,860		3,03397	-,02727	.13494	.04359	.00399	.00149	04566	03613	15531	12609
2.860		3.73333	.00142	.13331	.04284	.00385	.00128	04467	03612	15530	-,12609
2.860		3,43326	.06362	.13079	.04175	16500.	.00051	04270	03614	15531	12930
2.960		3.03267	.12565	.12746	67650.	.00282	00037	-, 03982	-,02659	15832	-,13251
2.000		3,03193	.17982	.12449	.03801	.00248	-,00056	03876	-,02654	15531	-,13250
2.860		3,03356	.31963	.11812	.03550	.00165	-,00283	-,03399	02971	-,15851	:3249
2.860		3.03834	.45/36	.11228	.03440	.00045	00627	02847	02659	-,15852	-,13251
2.960	20.161	3.04231	.61885	.10556	.03035	.00000	97600	02286	02339	161/3	13251
2.060		3.04590	10627	.09/36	.02504	-,00017	01169	02168	04907	15533	-,13254
2.860		3.04748	.94915	16060.	16220.	-,00057	01266	02125	05541	14890	-,12932
	GRADIENT	.00263	.02918	00149	-,00094	00015	00038	.00135	00461	- OOO54	470000

RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

20/ O

RUN NO.

(15 AUG /3)	
(RP6213)	The Statement of the State of t
Q	
NOSE	
LA-8C, UPWT1040, GRB.TER 0898 W/MOD. NOSE +OMS	
88	
UPWT1040,	
LA-8C,	

	REFERE	REFERENCE DATA								PARAMETRIC DATA	DATA	
5	136,1606 58.	ž.	XX60 = 15	5.9638	15.9638 INCHES				ALPHA =	15,000	ELEVTR =	-10.000
1.05	8.9025 INCHES	**	11	0000	DOUD INCHES				AILRON =	10,000	BDFLAP =	-14,250
BRES.	17.3628		ZHRP =	0000	DODO INCHES				RUDDER =	000	RUDFLR =	40,000
SCALE =	.0168 SCALE	CALE							۲ ۳	5,290	61-LOC =	2.000
		ãz.	RUN NO. 26/	56/ 0	RN/L =	1.50 GRAD	GRADIENT INTERVAL =	VAL = -5.00/	00.4 /00			
1	41.36	AL PHA	8	•	5	Ð	ಶ	CYN	Շ	CPB1	CPB2	CPC
1.900	- 1.4	16.40633	3 .62574		14201	02642	19957	03277	04960.	08304	-,29/49	-,25247
1.900	990.4-	16.41145		•	.14303	02430	.01576	00258	60290	06217	27902	24730
1.900	-2,043	16,41821	Ī	۵	.14584	02169	.01267	-,00518	.03440	08601	-,28169	-,24398
1.900	-1.018	16.41993	3 .~2412	A J	.146/8	02272	.0110.	00641	.021/3	-,10455	2843/	-,25529
1.900	900*	16.42245	\$. 62555		.14684	62127	56600.	30702	.00761	10/22	28/03	25530
1.900	1,033	16.45340	0 .62513	ļ.	.14677	02141	100764	-,00766	00651	10977	20,00	06/42
1.500	2.01/	16,41730	1,52474		.14578	02222	.00640	09863	-,01835	-,09915	-,28432	25787
1.900	4.110	16,41084	4 .62369	•	.14224	02387	.00319	01164	-,04535	11758	26839	-,25520
1,900	6,141	16.41114	•		.14158	02467	-,00016	01200	-,07818	12800	26432	26306
3,900	8.210	16.40165	61992	۸,	.13996	02744	00418	-,00637	122/4	-,13343	2/369	265//
	GRADIEN	-,00%ar	200036	•	,0000	.00000	-,00154	00104	01314	00591	.00082	-,00116
									,			
		Œ	RUN NO. 21/ 0		RN/L =	1.50 GRAD	JENT INTER	GRADIENT INTERVAL = -5.00/ 5.00	0/ 5.00			
Ų.	AETA AETA	AFCA	3		ర	£	형	ž	Շ	CP81	CFB2	CPC
2.000	-6.139	14.42818	.41117		.11370	.02932	.01617	-,00729	.0996	6/800	16493	12606
2.860	-4.065	14,44901	1 .41208		.11470	.03177	.01293	00544	16991.	02010	-,16494	-,12928
960	-2.01/	14.45125	5 .40583		.11542	.03357	.00941	00407.	503505	-,03932	-,16494	-,13569
2.840	-1.039	14,46372	2 .41259		.11493	.03578	.00783	-,00418	,02368	-,03295	16494	-,13570
2.860	001	14,46958	8 .41424		102.1.	.03582	.00592	-,000434	.00349	03297	16494	135/1
2.860	096.	14.47136	6 41349		.11497	.03482	.00416	-,00487	00288	03619	-,16494	1,135,1
2.860	2.018	14.4.588	8 .41052	Ī	.11451	08550.	.00234	-,00464	-,01,02	-,03296	-,16494	-,135/0
2.860	4.077	14,46971	1 .41139		11332	.03519	00102	-, 00389	04897	-, 02339	-,15852	-,13251
2.860	6. 092	14.46542	340960		.11225	.03228	00434	00149	08258	01377	-,15531	13250
2.860	9.18	14.44.818	8 .41252		.11051	.03064	-,00770	.00045	11807	.01816	-,15853	135/2
	GRADIENT	.tr.284	¥10001.	•	00019	.00038	001/3	.00010	01393	-,00000	.00061	-,000030

LA-8C, UPWT1040, ORBITER 0899 W/HOD, NOSE +OHS

			Ľ	ec, uPuttibal	9, ORBITER (LA-8C, UPWT1040, ORBITER 0898 W/MOD, NOSE +OMS	NOSE +OHS		(RP6214)		(15 AUG /3)
	REFERI	REFERENCE DATA							PARAMETRIC DATA	DATA	
- 10%	136,1808 SQ.IN	SQ.IN. XHER	n	15.5638 INCHES				ALPHA =	20,000	ELEVTR =	-10,000
1.REF ==	0.9025 INCHES	INCHES THRP	.,	DODO INCHES				ATLRON =	10,000	BOFLAP =	-14,250
BREF #	17.3628 INCHES	INCHES ZHRP	"	OCOO INCHES				RUDGER =	000.	RUDFLR =	40,000
SCALE =	.0160 SCALE	SCALE						<u>"</u>	9,290	61-LOC =	2,000
		RCM	RUN NO. 27/ 0	0 RN/L =	1.50 GRA	GRADIENT INTERVAL =	WAL = -5.00/	00.4 /00			
202	BETA	¥#.,	δ	5	5	퓽	Š	Շ	CP61	CPB2	£
1,900	-6.169	20.51100	. A3	.12,85	03626	96020.	50500.	60780.	13.38	28/12	25278
7.900	-4.09	20,51713	80094	.13135	03183	.01696	60200"	.05265	6766()*-	-,28180	24/4/
3.900	-2.049	20.52254	. 00225	.15386	02976	.01305	00263	.02926	12851	-,27121	25011
1.900	-1.002	50, 52738	. 90243	.13570	02703	.01123	-, 00539	.01868	12051	2/382	.25001
1.960	011	20.52520	61006.	.13635	(1266)	.0.1916	UN823	•00000	11256	-,27301	-,250015
1.900	1,316	20.52104	10967	.13593	02491	.00745	-,01101	001//	-,125/9	2/11/	25(X),
1,900		20.51974	. 19545	.13445	02641	.00563	G1413	01340	15220	26654	25008
1.900	4.123	20,52196	. 79832	.13145	02837	.00213	01870	03732	15223	-,26855	24/46
3.90	6.156	20,51419	. 19450	.128/2	03104	00192	01773	-,07304	14956	-,27383	25008
1.90		20.51270	. /8644	.12800	-,02854	00702	-,01459	-,11620	14434	2/651	-,25539
	CRADIENT	41000	-,000,1	.00004	56000.	00161	-, 00259	01079	-,00612	.00141	00000
		RUN NO.	NO. 22/ 0	S RN/L =	1,50 GRA	GRADIENT INTERVAL = -5.00/ 5.00	VAL = -5.0	00.4 /00			
40	BETA	ALPHA	8	ð	5	룡	ž	ð	CP81	CPB2	υ
2.040	-6.149	20,15609	.62109	.10243	.02378	.01860	-,00132	1:680.	112983	161.4	13892
2.00	-4.0r1	20,15234	.61511	.10385	.02558	.01471	00145	.05622	01380	16494	16981
2.62	-2.041	20,16037	.61620	.10518	. 112843	.03506	00106	. 02860	(1266L)	16173	135/1
2.860	-1.039	20,17209	.51827	.10536	0 53 00	. (30,843	00315	.01807	02661	161/4	135/2
8.000		20,17267	.61762	.10548	.03051	00900	00511	.00824	(12986	4/101/4	13573
2,860	1.003	ZO, 16906	.61258	.10621	.03168	,00400.	(X)6.85	00154	02984	16174	-,13572
2.0ed	2.004	20.17462	.61680	.10616	.03114	. 130223	tk)862	01132	01 (08	15853	13573
0. 0. 0.	4.062	20,17075	.61542	.10438	. თვიტი	00202	.6900	03881	1121126	15853	135/3
2.060	6.121	20,17265	.61151	.10254	02060	()(%32	00813	0,088	. UNB 56	-,15532	135/2
2.8	9.156	20.17128	.61010	.10078	106201	. 04038	-,00799	-, 19929	.01820	-,15531	13851
	CRADIENT	.00232	0000	.0001	.00064	00203	00115	01123	(או)23	4,000.	ocooo.

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(15 AUG /3) (RF&215) LA-6C, UPWT1040, ORBITER 0898 W/MOD. NOSE +OMS

PARAMETRIC DATA			. NO RUDFLR =	\$.290 GT-LOC =
	ALPHA =	AILRON =	RUDDER =	# K/L #
	15,9636	,0000 INCHES	LUXUO INCHES	
	**	**	*	
₹	X	YMRP	ZIER P	
REFERENCE DATA	134.1808 SQ.1N.	6.9025 INCHES		
	n	Ħ	*	ii
	SAEF	LREF	BREF	SCALE

-,15532 -,15532 -,15532 -,15532 -,15212 -,14892 -,15211 -.15532 -,15211 -.15211 56000. CP81
-.03622
-.03541
-.07452
-.07452
-.07452
-.07452
-.04508
-.04508
-.04508 CY
...0/486
...04812
...02504
...02504
...00510
...005510
...03314 1.50 GRADIENT INTERVAL = -5.00/ 5.00 .00199 .00125 -.00036 -.00230 -.00551 -.00551 -,0128/ -,0133/ -,01291 -,0019\$ CBL .02090 .01573 .01109 .00900 .00557 .07446 .07446 .07446 .07256 ...(57830 ...(57830 ...(57830 .02354 .02354 .02451 .02505 .02508 .02636 .02636 .02534 .02645 .09396 .09456 .09533 .09565 .09577 .09477 .09524 23/0 .01956 .01029 .01900 .02362 .02091 .02072 .01911 .01966 .01552 25,37,92 25,37,92 25,38,90 25,38,50 25,38,67 25,38,39 25,38,39 25,38,36 25,28/12 25,39083 0/000. -6.132 -4.075 -2.024 000. 1,003 2,005 4,066 6.123 9.181 GRADIENT -1.042

-,13692 -,13693 -,13693 -,13692 -,13692 -,13255

-,13573

40.000 (RP6216) (15 AUG /3) -10,000 2.000 BOFLAP = RUDFLR = ELEVTR = cT-LOC = PARAMETRIC DATA 15.000 .000. .000. ALPHA = AILRON = RUDDER = K/L 1.50 GRADIENT INTERVAL = -5.00/ 5.00 LA-8C, UPWT1D40, ORBITER U898 W/MOD, NOSE +OMS 15.9638 INCHES
.DDDD INCHES
.DDDD INCHES RN/L = RUN NO. 12/ 0 XMRP YMRP ZMRP REFERENCE DATA 6.9025 INCHES 17.5628 INCHES .U166 SCALE 136.1808 SQ. IN.

SCALE =

-.24028 -.24295 -.24030 CPC -,24018 -,23754 -,24284 -,25341 -,23762 SOCIO. -.23/5/ -.25346 -.26664 -.26922 -.26655 -.25595 CPB2 -.28245 -.26665 -.26130 -.2/193 -,26656 CPB1 -.06559 -,0/3/2 -,0/3/9 -,0/903 -.07094 -.07880 -.11581 -.12910 -.06576 - , 12902 .02243 .00830 -.00501 -.01845 -.04386 CY .09702 .06270 .03564 -.01309 -.12054 CYN
-, UND/4
-, UNJ/2
-, UNJ/8
-.UXI099 -.01017 CBL (0) D47 (0) D47 (0) C03 (0 -.01352 -.00966 CLM -.02585 -.02460 -.02337 -.02327 -.02347 -.02347 -.03022 -.02433 -,02519 .13532 .14104 .14163 .14148 13957 .138/8 .13775 .62031 .62932 .63098 .63098 68189. 68189. 088880. ALPHA 16.41833 16.42330 16.42373 16.42417 16,42105 16.41800 16.42694 16.42464 -.00019 -4.104 -2.042 -1.036 -6.172 -.012 1.032 6.152 GRADIENT 2.019 4.090 6.143 004,1 1.900 1.900 1.900 1.900

CPC -.12394 -.13033 -.1239; -.1271; -.13356 -.13675 -,12394 -,12/13 -. 13035 -,12714 CPB2 -.15950 .,1595() -,1595() -,15951 -.15630 -.15950 -.15951 ..,15950 -. CHONOH .02020 -.02773 -.01813 -.00214 .010752 .01075 .02034 .03306 CPB1 .!!3632 .02455 .02455 .01222 .01222 .010107 .01334 .04352 .07807 CY .10428 1.50 GRADIENT INTERVAL = -5.00/ 5.00 CYN -.00585 -.00264 -.00309 -.00358 -.00360 -.00376 -.00111 .0112% ,000,87 ,00389 ,00024 ,00057 ,,00154 ,,00503 ,,01043 ,,01043 .03150 .03077 .03124 .03123 .02885 .02885 .02277 .00011 С.Н .U264)1 .02757 .11296 .11210 .111027 .103801 .00003 178 .11185 .11240 .10968 11564 .42509 .42560 .42366 A2353 .42433 .45178 .42838 RUN NO. 14.97.564 14.96.503 14.96.501 15.003 to 14.99226 14.99375 14.99540 14.98461 14.98964 .00111 BETA -6.160 -.021 1.018 2.016 -3.990 -2.001 -1.036 6.149 GRADIENT 4.036 .091 2.860

(15 AUC /3)

(RP6217)

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ORBITER
UPWT1040,
LA-8C,

-			!									
	136,1806 SQ.1N	30.1N.	X	15.9	15.9638 INCHES				ALPHA =	20.000	SLEVTR =	-10,000
	6.9025 INCHE	TNCHES	4 ME	0.	DOOD INCHES				AILRON =	000.	BOFLAP =	-14.250
	17.5628 INCHES	INCHES	Ž,	ř.	DONO INCHES				RUDDER =	000.	RUCFLR =	40,000
	.0168 SCALE	SCALE							۳/۲ ۳	3.290	6T-LOC =	2,000
			R N	0. 13/ 0	RN/L =	1.50 GRA	GRADIENT INTERVAL =	NAL = -5.00/	00.4 /00			
	BETA	ALPHA	\$	3	ర	Ð	륟	Š	Շ	CPB1	CP32	S D
	-6.191	20.52243	.e3	. 60448	.12329	03532	.01245	.00610	.08866	-,12130	-,2/195	24295
	-4.079	20.52690	065	.80454	.12653	03340	.00803	.00585	.05195	11353	-,2146/	-,24040
	-2.049	20.535	53565	.80618	.12987	-,02649	.00421	. (100)	.02856	-,11616	266/2	24040
	-1.059	20, 53569	696	.80412	13200	-,0280,-	e0500.	00184	.018/2	10816	26668	-,24299
	013	8.	34	49768	.13297	02852	90000	-,00454	.00013	-,12135	-,26933	-,24563
	468.	25.53/	42	.80555	.13238	-, 1128116	00137	-,(1/1)684	0000-	-,11341	2006/	2429/
	2.024	20,533	30	.60480	.13055	U2688	-, (N)369	-, U(1996	-,01151	10822	26141	23//4
	4.160	20.528	25	.80576	.126/4	03031	00736	-,01499	03649	15046	25348	23512
	6.15/	20,52246	46	.80360	.12438	03210	-,01175	-,01471	-,07230	16638	-,26413	24310
	8.247	20,529	£	19894	12346	03207	-,01695	01166	11463	15335	26686	2484/
_	GRADIENT	COCCO:	8	90000	ACOCO .	.02028	-,00188	-,100256	01052	-,00325	.00223	. 00063
			RUN i.O.	. 177 0	RN/L =	1.50 GRA	GRADIENT INTERVAL =	VAL = -5.00/	00.4 /00			
	DE.TA	AL-PHA	≤	3	ð	ş	ө	N.	Շ	CF81	CPB2	6
	-6.123	20.132	36	.ed)/28	26660.	.02314	.01259	.00051	.08619	01495	5631	13996
	-4.092	20.142	\$.61079	1101.	, 02323	£6800.	.00082	.05803	61811	15630	-,13995
	-2,042	20.146	23	. 60460	.10244	.02585	.00444	160000	.112962	-,02134	15631	-,13996
	-1.039	20.15	ç	.61602	.10325	.026/6	00200	-, UKD089	.01892	-,02136	-,15631	13996
	ouz	20,155	33	.61085	.10344	.02621	-, (2)(2)	011255	60010.	1121.12	-,15951	13995
	.960	20.157	91	.61519	.10362	.02740	-,00168	00439	.00035	02458	15952	13677
	2.003	20.149	ቋ	.60993	9,501.	.02684	00410	00,656	00952	01817	15631	136/6
	4.099	20,147		.61033	.10178	.02499	00843	00668	03702	02133	15630	136/6
	6.1363	20,13935	35	.60435	.09988	.02417	01296	00001	00,005	-,(10,854	15309	13675
	8.158	20,147	è	51219.	62860.	66020.	-,01705	-,00574	11912	-,00217	-,15310	-,13356
_	GRADIENT	96000.	99	(500)23	.00013	52000	11914	001113	- 01113	FOLUTO =	2000	640.00

LA-8C, UPVIIO40, ORBITER 0898 W/HOD. NOSE +OHS

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(RP6218)	

-10.000 -14.250 40.000 2.000

¥F.	ELEVTR = BDFLAP = RUDFLR = GT-LOC =	
2	4882	
PARAMETRIC DATA	25.000 E .000 B .000 R	
	0 11 11 11	
	ALPHA = Z AILRON = RUDDER = K/L = E	
	= 15.965¢ INCHES = .0000 INCHES = .0000 INCHES	
¥	XXARP THRP ZYARP	
REFERENCE DATA	SO. IN. INCHES INCHES SCALE	
REFE	## 139-1808 59.1M. LREF = 9.9023 INCHES BREF = 1.59-28 INCHES SCALE = .0188 SCALE	

	CFB1
9.00	Շ
/00'5- =	CÁN
INTERVAL =	
GRACIENT	현
3 .	5
RN/L =	ซ
19/ 0	3
S. S.	ALPHA
	BETA ,
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Ę	BETA		3	ซ	£	륟	Š	Շ	CFB1	CPB2	S C
2.000	-6.151		.61252	.09129	01810.	.01426	.00555	.07391	-,03091	15309	13995
3	-4.076		.81617	66060	OZU49	100964	.00485	31641.	01811	15309	13675
3	-2.046		.81235	.09234	.02248	.00433	.00332	.02599	1,05971	14989	13676
3	-1.060	25.37363	.01614	60£60°	.022//	00170	.00114	11111.	-,06617	15311	13679
3	.016		.81642	.09340	0/220	-,00034	00178	.00710	07249	15310	13676
3	1.002		.81608	.09393	.02262	(*3244	(70,448	-,00095	-,06610	15310	13996
9	2001.3		.81336	08350	.02318	0 1443	-,00677	-,00800	05653	14990	13997
3	4.065		.8147	. 09208	.02221	-,00964	10600	03215	-,03411	-,14969	136/5
3	6.106		.81317	.09203	60020	01547	-, (70983	05605	02449	14988	13355
3	6.183		.81639	.09172	.01929	02012	-,00971	08/45	03088	14988	13355
	GRADIENT		0000	,0001,	.00019	00231	00190	-,00956	00133	0000	00022

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